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Rural Housing in Jammu & Kashmir State

Govt. of India
National Building Organisation

Rural Housing Wing

Regional Engineering College
Srinagar, Kashmir.

1. Houses - rural
~~2. Houses of various types~~
2. Rural housing

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National Buildisgs Organisation
Rural Housing Wing,
Regional Engineering College,
Srinagar—190 006 (Kashmir).

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JAMMU & KASHMIR STATE

FOREWORD

As vast majority of our population lives in rural areas great importance is attached to improvement of quality of life in the villages. NBO is engaged in promoting improvement in rural housing and environmental conditions. 13 Regional Rural Housing Wings have been set up under the aegis of NBO by the Government of India for undertaking research, training and extension work. One such Wing is located at Srinagar and caters to the State of Jammu & Kashmir, where some special problems have been encountered arising out of mountanious terrain, snow bound regions, seismic requirements, etc.

A Monograph on Rural Housing in the State of Jammu & Kashmir has been prepared by the Rural Housing Wing, Srinagar which presents information pertaining to rural housing conditions and the nature of problems being experienced. It presents information pertaining to the local materials and traditional types of buildings and houses put up and schemes for rural housing, etc. It outlines planning startegies and future prospects of development in this field.

It is my sincere hope that the Monograph will serve as an useful document to policy makers, planners,village officials and others connected with Village Planning and Development both in the Government Departments as well as in other non-official/voluntary agencies

I acknowledge the painstaking efforts of Prof. O. N. Wakhlu, Director, Rural Housing Wing, Srinagar and his staff in collecting a fund of information related to villages in Jammu and Kashmir State and bringing out this useful document. Obviously, this being the first presentation on the subject, we would greatly welcome suggestions for enriching the contents.

(G. C. Mathur)
Director
National Buildings Organisation
Ministry of Works & Housing
New Delhi.

PREFACE

The human habitat in rural areas of Jammu & Kashmir State is woefully poor in many respects. Attention is now being paid to its improvment. The problems, however, are many, and difficult to tackle in the absence of proper Planning and adequate finances. An attempt has been made in this Monograph to collect all the information which is available and relevant to the improvement of the rural habitats including the availability of local building materials is various regions of the State of Jammu & Kashmir. The socio-economic aspects of the rural housing problem in the State have been discussed and a projection has been made into the future in order to devise scientific ways and means for the planning of redevelopment of rural areas and providing housing to the vast majority of the rural poor at an economic cost.

The State of Jammu & Kashmir is one of the best known tourist attractions in the world, famed for its natural beauty of lakes, mountains, splendid forests, places of historical interest, including some of the remmants of the civilizations of the past. The entire area is criss-cressed with streams and rivers of great grandeur at several beautiful locations. In a setting like this, it is incongruous to the eye to see the haphazardly built human habitats studding the State like eyesors and detracting the attention of the observer from the beauties and boutnies of nature lavishly present in the entire landscape. Such a situation is not only aesthetically undesirable, but also an economic loss because the vast potential of tourism as a means of income is not fully realized under such conditions. Furthermore human health and happiness are poor. Inspite of better production on the farms, the farmer usually retires at the end of a day of hardwork to an insanitary hut which does not possess even a single amenity.

Such a situation needs rectification as speedily as possible within the given constraints of the situation in respect of socio-economic, political, and financial factors. Given the necessary will, proper planning, and expeditious decision making at the highest level the objective of providing proper and better rural housing including redevelopment of villages can be achieved in the near future. An integrated view needs to be taken of the rural housing and rural development problems in relation to human occupation and living on the one hand, and the availability of material and financial resources including those of man-power, on the other.

The Monograph emphasizes the fact that if the villages are left on their own to grow haphazardly while the economy shows improvements, redevelopment of human habitats in the rural areas will be rendered even more difficult in the years to come. Although better houses are being built by the rural people this is being done in an entirely haphazard manner.

The dimensious of the problem of Rural Housing in the State have been reviewed and an approach to the solution of the problems in an integrated manner outlined. The existing state-of-art in rural housing design has been critically examined so that better and economical house designs for modern living can be made using local materials of construction. The need for redevelopment of villages and proper environmental upkeep of the rural habitats has been highlighted. The strategies for planning the redeveloped villages and providing better housing in the rural areas have been discussed in the light of stringency of available resources for this massive programme. The last chapter ends on an optimistic note emphasizing the fact that with the dedicated will of the people and the devoted effort of the experts in the various sectors enough resources can be generated to achieve even this stupendous task successfully.

The National Building's Organisation of the Govt. of India, Ministry of Works and Housing has undertaken and guided work for the solution of the rural housing problems in the country, This monograph is the outcome of directions and guidance provided by the Director NBO, Shri G. C. Mathur, and also the dedicated hardwork of many specialists in various areas. In particutar I may mention the efforts made by my colleagues Dr. P. Kachroo, Dr. M. L. Pandit, Mr. C. L. Bhan and their other colleagues who have collected the necessory data from various sources and also from the actual real life situations for which they deserve appreciation. Thanks are also due to our colleagues Mr. Mohmad Shafi Darwaish, Mr. D. N. Kaul, and Mr. Ashok Kumar Wangoo, who have assisted in the compilation and typing many times the manuscript of the Monograph and for general editorial help. The information and statistics used in this Monograph were most helpfully provided by many organizations in the State whose asssistance is acknowledged.

This work represents the first ever attempt made to probe the rural housing priorities and problems in the Jammu & Kashmir State and for that reason many aspects of this subject may not have received enough attention. Criticism would be welcome in this respect from the readers and users of this publication.

Srinagar
5-11-1981.

O. N. Wakhlu
DIRECTOR
RURAL HOUSING WING

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Introduction

1·1. General Review

Poverty is the most important problem with which our country is faced at present. This problem is centuries old, but attempts to overcome it started only after independence. Economic planning was attempted soon and aimed primarily to eradicate poverty. The results achieved thus far are, to say the least, lopsided. The number of poverty striken people has not been lessened rapidly from year to year. Although the estimates vary, yet there is no dispute regarding the fact that about half the population of the country is living below the line of poverty, a life of destitutes.[1] Vaidyanathan estimated this percentage to be as high as 67.8 percent in 1967-68[2]. The estimates for 1977-78, place the number of people below the poverty line at around 306 million. Of these 249 million were living in rural areas and 57 million in urban areas.[3]

What is meant by the term below the line of poverty? It represents, people who cannot afford the minimum basic necessities of existence namely, food, clothing and shelter. These people cannot afford two meals a day, cannot cover their naked bodies fully for want of clothing and their shelter is either non-existent or deplorable. A daily minimum per capita calorie intake of 2,400 in rural areas and 2,100 in urban areas is considered for estimating the All-India poverty line. In financial terms, the minimum income necessary for not falling

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1. See for example, Vaidyanathn, A. "Some Aspects of Inequality in Living Standards in Rural India". A paper presented at the Seminar on Income Distribution in India (Delhi); Minhas B.S., "Rural Poverty, Land Distribution and Development Strategy: Facts and Policy", *Indian Economic Review*, Volume I, pp. 97-128; and Shetty, S.L. "Structural Retrogression in the Indian Economy since the Mid—Sixties" in *Economic and Political Weekly*, Annual Number, February, 1978.
2. A. Vaidyanathan, quoted in S.L. Shetty, *Op-cit*, p. 26.
3. "India's Starving Millions", The Times of India (New Delhi), August 1, 1980.

below the poverty line at 1977-78 prices worked out to Rs. 65 per month in rural areas and Rs. 45 in urban areas[4]. At 1960-61 prices, a per capita consumption expenditure of less than Rs. 20 implied that a person was falling below the poverty line. If one could ensure minimum of basic human necessities to all the citizens it would constitute a major achievement of economic planning.

Of these three basic human necessities, the problem of food and clothing is not as acute as that of shelter. This is because that in respect of food and clothing the problem is not so much of availability but more that our people not being in a position to pay for these necessities. The country has already a huge buffer-stock of food grains and capacity to produce huge quantities of cloth. But under the existing socio-economic set-up of the country the production and distribution of these important necessities of life are largely controlled by well-to do sections of the population whose sole objective is maximisation of profits at the cost of starving and naked poor. This problem can thus be mitigated to a certain extent by only a radical transformation of the existing economic order in which a minimum regular income is ensured to all the sections of the society. This is possible if people in all walks of leadership role in the country have the will for bold and imaginative action required for such transformation.

The position in respect of shelter is, however, quite different. Even if the poor people are given enough money it would not be possible to meet the basic housing needs of all at a stretch. The shortage of housing in the country according to 1971 census stood at 14.5 million houses. Of these the shortfall in the rural areas was 11.6 million houses. In the year 1977 housing shortages was estimated by the National Buildings Organisation at 16.8 million (12.1 million in rural areas) houses. Assuming an average modest cost of Rs. 3000 for a rural house and Rs. 12,000 for an urban house, the financial requirements for meeting this shortage works out to Rs. 9170 crores. This housing shortage cannot be met by simply mobilizing the financial resources because their construction involves mobilisation of men, materials and machines. It is estimated that the problem can be solved at least over a period of 20 years. The number of houses to be constructed every year would have to be 1.25 millions in the urban areas and 3.5 millions in the rural areas. This will require an yearly investment of Rs. 2562 crores. The above facts and figures[5] clearly indicate the complexties involved in meeting the basic requirements of shelter of poor people compared to that of food and clothing.

There is yet another human reason for the condition of the poor in respect of shelter being much worse off than in respect of their food and clothing. That is, food and clothing, particularly the former, representing more urgent human needs, the tendency of the poor is

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4. "India's Starving Millions". The Times of India (New Delhi), August 1, 1980.
5. *Report of the Development Group on Low Cost Housing Including Minimum Economic Specifications*, (*National Buildings* Organisation, Govt. of India, New Delhi 1977), p. 14-15.

to spend most of their income on these necessities. Also, the investment in housing would run into hundreds and thousands of rupees whereas food and clothing can be purchased from the weekly or monthly incomes. The immediate needs of food and clothing leaves no money for constructing or even repairing a house. An indication of this state of affairs can be had by noting that households whose consumption expenditure is little below the national average spent between 70 and 75 percent of their total expenditure on food alone. The result is that while all poor people eat, all of them do not have a shelter to protect them from rain, cold, heat etc.

Even the cold calculations of "input-output ratios" which dominated post war economic thinking in development economics viewed housing as a subordinate requirement. "Housing, it was felt, called for a large input and yielded little output". It was estimated that $ 7.00 of investment in housing in U.S.A. would produce a $ 1.00 increase in the value of additional housing service per year. "Compared to this only $ 1.00 of added investment was required in a steel plant to yield $ 1.00 increase in the value of steel produce per year"[6].

Thus a large number of poor people are either houseless or are living in dilapidated houses. There is no denying the fact that housing constitutes an important ingredient "for the healthy growth of individuals and community". A human being spends most of his time in his house and neighbourhood and naturally his character, health and physique would depend considerably on the condition of his house, its environment as well as the neighbourhood. Provision of proper shelter to human beings is not only essential for their health and character but it has a definite bearing on social unrest and social upheavel. It is said "housing can make or break Government and Civilisation". This approach for housing has shattered the belief that for fastest rate of growth of output, investment in low-yield housing should be kept at the minimum. It is being stressed that cost-benefit calculations in respect of housing should give due weight to its social benefits. Once this is done the yield on housing appears to be quite high. This is why heavy emphasis is now laid on meeting the basic housing needs of the poor in almost all the countries.

As 80 percent of India's population is living in rural areas, the problem of poverty is very acute in the country side. In fact urban destitutes are also a reflection of the extreme forms of rural poverty. Most of the urban destitutes—slum dewellers—have been driven by want and hunger to these areas from the villages. It is, therefore, natural that solution to poverty in India lies in the country side. Once poverty starts disappearing in the rural areas, the major source of swelling urban destitutes would automatically dry up. It is this realisation which has lately made our policy makers to focus more and more attention on rural

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6. Charles Abrams, "*Housing in the Modern World*" (Faber and Faber, London 1969) pp. 106-7.

areas for solving the problem of poverty including housing. The condition of housing in the rural areas of our country can best be stated in the following words :—

> "Rural housing situation in India calls for an immediate attention as the housing and particularly hygienic conditions are far from satisfactory.
> Villagers live in poorly ventilated houses of flimsy conditions which are no better than cattle sheds. Often they actually live side by side with the cattle. The streets and paths are generally very narrow and so badly arranged that particularly in rainy season the life in villages becomes misearable"[7].

1·2. Dimensions of the Rural Housing Problem

The problem of rural housing in India thus has three major dimensions, namely, quantitative, qualitative and environmental planning. The quantitative aspect of the problem is illustrated by Table 1.1. As can be seen from this table, 47.24 percent of the rural population in 1971 comprised households having only one room houses. Less than one-fourth of the population lived in houses which had more than two rooms.

TABLE 1.1
Congestion in Housing

Size of household	*Percentage of Population*					
	Total		*Urban*		*Rural*	
	1961	*1971*	*1961*	*1971*	*1961*	*1971*
One Roomed	41.33	47.81	46.81	50.16	40.86	47.24
Two Roomed	26.98	28.17	24.93	26.97	27.16	28.46
Three Roomed	13.25	12.00	11.69	11.44	13.40	12.13
Four Roomed	7.64	5.98	6.75	5.72	7.72	6.04
Five Roomed	9.50	5.94	9.16	5.64	9.45	6.02

Source : *Report of Development Group on Low Cost Housing Including Minimum Economic Specifications* (NBO New Delhi, 1977), p. 20.

The qualitative aspect of the rural housing in India is indicated by Table 1.2. This table shows that only 19 percent of houses in the rural areas are of permanent nature. Over 43 percent of the rural houses are "Kachha" and "Serviceable Kachha". Thus the quality

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7. *Demonstration Rural Housing with Environmental Improvements*, (National Buildings Organisation, Govt. of India, New Delhi) p. 9.

of the majority of the existing housing structures in rural India is far from satisfactory. These lack in ventilation and hygiene. About 77 percent of the rural houses have no latrines and 93 percent have no bath rooms. Less than 3 percent of households get protected drinking water[8].

TABLE 1.2

Percentage of Houses According to Quality

	Katcha	*Serviceable Katcha*	*Semi Permanent*	*Permanent*
Total	9.35	28.05	34.60	27.86
Rural	10.89 (1/4th)	32.65 (3/4th)	37.48	18.90
Urban	12.76 (Full)	Nil	23.18	64.00

Source : *Report of the Development Group on Low Cost Housing Including Minimum Economic Specifications* (NBO. New Delhi 1977), p. 13.

Lastly there is unplanned growth of huts, generally in a congested form and without any provision of streets and paths. There is no planning of environmental facilities like the disposal of waste, sanitation, public latrines and public places for common use. A close look at the rural housing in India reveals as if the existing structures, mostly made of mud, have emerged over the period on their own from the mother earth to protect the poor and naked villagers from excess of heat and cold.

1.3. Scant Attention to Housing

Housing in general and rural housing in particular has received scant attention in our Five Year Plans so far. This becomes clear by considering the amounts set aside in each successive plan for the purpose. In the first plan only Rs. 38.5 crores were allotted to various housing schemes in the country. The corresponding amounts (including contributions of Life Insurance Corporation) for the Second and Third Plans were respectively Rs. 101 crores and Rs. 182 crores. The Fourth Plan provision for the improvement of housing conditions in the country was Rs. 193 crores. Keeping in view the magnitude of the housing problem, the amounts specified for the purpose during Five Year Plans were quite insufficient. What is more distressing to note in this regard is the fact that even the meagre amounts sanctioned were not fully utilised. This is indicated by the fact that Rs. 65 crores out of Rs. 278 crores made available to States till the end of 1969 remained un-utilised[9]. Thus the

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8. G.C. Mathur, "Housing the Millions" Key note lecture at the All India Seminor on Low Cost Housing, Goa, February 6, 1978, p. 1.
9. Suresh K Pramer, "India's Houseless Millions".

problem of housing in the country has been accentuated both due to low allocations and under-utilisation of the available funds.

The Govt. of India, however, have recently taken certain steps which if sincerely implemented will have far reaching effects in ameliorating the living conditions in the country. It has decided to build 4.75 million houses annually for a period of 20 years. These houses will be built by various agencies. The number of houses to be built annually in the rural areas has been fixed at 3.5 millions. According to this target about 70 million houses will be built in the rural areas of the country in the next two decades. In the draft Sixth Five Year Plan (1978-83), Rs. 1538 crores have been envisaged for various social housing schemes. Of these Rs. 500 crores have been exclusively reserved for the rural housing.[10] Thus rural housing is being given the increasing attention in our new housing policy. The outlay approved for the Sixth plan for housing amounts to Rs. 11,000 crores in the private sector and Rs. 1133 crores in the public sector. Another Rs. 200 to Rs. 250 crores are likely to be invested in housing by public sector enterprises, departmental undertakings and other institutions.[11]

1.4. The National Buildings Organisation

National Buildings Organisation has been involved in the improvement of rural housing since 1954. However, it is only recently that this Organisation has intensified its efforts in the direction of building a new rural India. To achieve this purpose, National Buildings Organisation has established thirteen Regional Rural Housing Wings in different parts of the country. These Wings have rightly decided to attack the problem of rural housing on two main fronts.

First and foremost, attempts are being made for evolving a new and cheaper house building technology for the rural people. The National Buildings Organisation has already evolved over 200 improved designs of houses suited to different regions and other types of rural buidings at its Rural Housing Wings[12]. The major feature of such research is to stress the use of locally available materials and cost reduction. Thus the first objective of National Buildings Organisation is to make housing within the reach of rural poor, by providing designs of livable houses at the lowest possible cost per unit area of covered space.

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10. Ministry of Works and Housing, *Report* Govt. of India, New Delhi *1978-79* (New Delhi, 1979), p. 14
11. "States told not to divert rural housing funds", *The Times of India* (New Delhi) August 1, 1980.
12. G.C. Mathur, in his introduction to *Demonstration Rural Housing with Environmental Improvements.* op. cit., p.6

The second attack on the problem of rural housing is through attempts to educate villagers about the need to improve village planning and environment. The medium of education chosen is rightly, the practical demonstration of the low cost house building technology in the form of cluster of Demonstration Houses all over the country. The aim of building clusters of houses is to make villagers conscious of the need for village and environment planning. Not only is the low cost technology demonstrated practically to the people, but the National Buildings Organisation also arranges for the training of the personnel engaged in the programme of rural development so that the transfer of technology becomes easier.

There can, however, be no single approach to solve the problem of housing for the entire country. India being a vast and diverse country, the approach will have to vary from region to region. The plans to be acceptable and easily implementable must conform to the socio—economic and other peculiarities of various regions. It is towards this end that the National Buildings Organisation has undertaken a programme of socio-economic studies of various regions of the country through its Wings. As part of this programme, the Rural Housing Wing, Regional Engineering College, Srinagar has also started work on socio— economic studies for preparing a Monograph on Rural Housing for J&K State. The first phase of this work highlights the nature and magnitude of the rural housing problem in the State and the Planning strategies that should be adopted to solve this problem is reported in the following chapters.

2

Nature and Magnitude of Rural Housing Problem in Jammu and Kashmir

2.1. Size of Rural Population

Rural Housing is directly linked with rural ropulation. It is, therefore, essential to give a brief account of the rural population of the State before an attempt is made to analyse the nature and magnitude of rural housing problem.

According to 1971 census the total population of Jammu and Kashmir State stood at 46.17 lakhs. This population was spread over 45 urban areas and 6,510 villages.[1] A distinguishing feature of the geographical location of the villages and urban areas in the State is their topographic and climatic hetrogenity. The inhabited areas in the State "range from a height of 1,000 feet (305 m) to 13,000 feet (3962 m)"[2]. As a result of this, certain areas in the State remain snow-bound and inaccessible for 6 to 8 months in a year. The number of people living in the villages of the State was 37.58 lakhs and those living in urban areas 8.58 lakhs[3]. The proportion of rural to total population works out to 81.41 percent. This proportion of rural to total population in the State is higher than the all-India average of 80.10 percent, suggesting thereby that the State of Jammu and Kashmir is more rural in character than the country as a whole.

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1. The total number of villages in the State actually stood at 6749 but 239 of these were uninhabited. *Census of India, 1971.* See for example *District Census Handbook, Ladakh District* p. iii.
2. *Census of India, 1971, Housing Report and Tables*, series 8, part IV, *Jammu and Kashmir*, p.3.
3. *Digest of Statistics*. 1975-76 (Govt. of Jammu and Kashmir), p.3.

However, the real rural character of the State emerges fully when one looks at the district population figures. This analysis (Table 2.1) reveals that the proportion of rural to total population exceeds 90 percent in 8 out of 10 districts. In the case of Rajouri District this ratio exceeds 96%. It is only in Srinagar and Jammu districts, which house the summer and winter capitals of the State, where this proportion is below the State average. In fact the areas falling under Srinagar and Jammu Municipalties account for 5.59[4] lakh urban dwellers out of a State total of 8.58 lakhs. Thus the two capital cities together share two-third of the State's urban population. Urbanisation in the State is, therefore, a consequence not of industrialisation but simply that of the growth of administrative machinery at the State capitals.

TABLE 2.1

Percentage of District Rural Population to total Population (1961 and 1971)

State/District	*1961*	*1971*
Anantnag	92.98	91.98
Srinagar	54.53	48.86
Baramulla	90.46	91.46
Kashmir province	79.79	76.86
Ladakh	95.80	92.49
Doda	94.10	94.29
Udhampur	93.59	91.61
Jammu	75.46	73.85
Kathua	92.51	90.87
Rajouri	96.41	96.14
Poonch	93.40	91.92
Jammu province	87.82	86.19
Jammu and Kashmir State	83.34	81.41
India	82.00	80.10

Source : Computed from **Digest of Statistics 1975-76** (Govt. of Jammu & Kashmir. Srinagar)—pp 8 and 304

Note : The figures for Kashmir Province in 1961 include those of Ladakh District.

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4. Ibid, p.9

A comparison of the proportions of rural to total population between 1961 and 1971 shows that the over all trend is in favour of urbanisation. The percentage of rural dwellers has decreased from 83.34 in 1961 to 81.41 in 1971. This is more or less the case even at the district level. It was only in Baramulla district where the percentage of rural to total population increased from 90.46 in 1961 to 91.46 in 1971. However, the decrease in the proportion of rural population in general was quite small in most of the districts. (See Table 2.1). This suggests that rural population would continue to account for the bulk of the total population for many decades to come. In view of this fact the State must accord top priority to schemes which concern rural development. Such schemes will have a significant bearing on the overall economic development of the State.

2.2. Magnitude of the Housing Problem in the State

The 1971 population of the State comprised 7.64 lakh households. These households were living in 6.67 lakh residential houses. Each house on an average accommodated 6.92 persons. The corresponding figure for 1961 works out to be 6.28 persons. The number of persons living in each house varies from district to district, being highest (8.43) in Srinagar and lowest (4.95) in Ladakh. Details in this regard are shown in Table 2.2. It can be seen from the Table that the average number of persons living per residential house is higher in the districts of Kashmir Province than in Jammu province.

TABLE 2.2
District-Wise Occupied Residential Houses

District	*No. of households*		*No. of occupied residential houses*		*Population per residential house*	
	1961	*1971*	*1961*	*1971*	*1961*	*1971*
Anantnag	112,441	128,360	96,181	104,017	6.80	8.00
Srinagar	102,391	125,625	86,986	97,570	7.36	8.43
Baramulla	103,134	121,609	84,944	97,215	7.12	7.98
Ladakh	18,374	22,551	17,661	21,253	5.02	4.95
Jammu	99,836	131,494	95,769	124,340	5.40	5.89
Doda	45,249	56,459	44,015	53,455	6.09	6.40
Udhampur	49,088	61,986	47,443	59,047	5.35	5.74
Kathua	39,627	48,880	38,889	47,398	5.33	5.79
Poonch*	59,315	27,926	54,878	26,401	5.94	6.47
Rajouri	—	38,609	—	36,057	—	6.03
Total :	629455	763499	566766	666753	6.28	6.92
All India	NA	NA	78855586	NA	5.57	NA

Source : *Digest of Statistics 1975-76* (Govt. of J&K) Srinagar, p-12

*During 1961 Poonch includes Rajouri District as well.

A comparison of the position in regard to the number of persons per residential house between 1961 and 1971 (Table 2.2) shows that the decade has witnessed further over-crowding of housing accommodation, both for the State as a whole as well as at the district level. There is only one district, namely Ladakh, which recorded a marginal decrease in the average number of persons per house during the decade. The over-crowding of housing accommodation was quite remarkable in the districts of Kashmir Valley. For example, in Srinagar and Anantnag districts the increase in the number of persons per residential house between 1961 and 1971 was more than one.

The increase in the average number of persons per residential house during the 1961—71 decade was primarily the result of a faster growth of population and households on the one hand, and on the other, a slow growth of residential housing. The number of households during the decade increased from about 6.30 lakhs to 7.64 lakhs or by 1.34 lakhs as against an increase of only 1.00 lakh *i.e.* from 6.67 lakhs to 6.67 lakhs, in the number of residential houses during the same period.

The above details regarding the condition of housing are based on averages which at times can be misleading. The real insight into the condition of housing can be had by analysing the accommodation of the houses district-wise, their quality and above all the distribution pattern of existing housing accommodation. This district-wise analysis of the residential accommodation and distribution of rural houses in Jammu and Kashmir State is presented below :

2·3. Accommodation and Distribution of Rural Houses

Table 2.3 shows the availability of rooms and their distribution among rural households both at the State and district levels. When we consider living accommodation not in terms of residential houses but in terms of the number of available rooms, our earlier conclusions based on data given in Table 2.2 get reversed. As mentioned earlier, according to Table 2.2 the number of persons per residential house is higher for the districts of Kashmir province than for Jammu province, suggesting thereby that Jammu province is better placed than Kashmir province in respect of rural housing. On the other hand Table 2.3 which shows the average number of persons per room, reveals that houses in the rural areas of Jammu province are much more over-crowded than those of Kashmir province. For example, the average number of persons per room for the rural areas of the State as a whole works out to be 2.73. This number is the highest in Rajouri district (4.33), followed by Jammu (3.91), Poonch (3.72), Kathua (3.60), Udhampur (3.48), Doda (3.44), Anantnag (2.40), Srinagar (2.20), Baramulla (2.14) and Ladakh (1.46). Thus the condition of housing in Kashmir province looks far better than that of Jammu province, when viewed in the light of the availability of rooms to households.

The facts contained in Table 2.3, however, also do not fully reflect the real condition of housing in the rural areas of Jammu and Kashmir State. To get a realistic picture of the housing condition in rural areas of the State, it is further necessary to analyse the distribution pattern of households occupying different number of rooms as shown in Table 2.4.

Table 2·3
Number of Rooms Occupied by the Rural Households (1971)

State/District	*Total No. of census house-holds in lakhs.*	*Total No. of numbers in lakhs*		*Total No. of rooms in lakhs*	*No. of persons per room*
		Male	*Female*		*room*
J & K State	6·33	19·82	17·78	13·78	2·73
Anantnag	1·16	4·04	3·52	3·15	2·40
Srinagar	0.67	2·21	1·94	1·88	2·20
Baramulla	1·11	3·74	3·25	3·27	2·14
Ladakh	0·21	0·48	0·49	0·66	1·46
Doda	0·54	1·68	1·52	0·93	3·44
Udhampur	0·57	1·64	1·50	0·90	3·48
Jammu	0·99	2·81	2·63	1·39	3·91
Kathua	0·47	1·36	1·24	0·72	3·60
Rajouri	0·36	1·05	0·97	0·47	4·33
Poonch	0·25	0·81	0·74	0·41	3·73

Source : Census of India 1971, *Housing Report and Tables*, Part IV series 8, *Jammu and Kashmir*, p 142 and 145.

It cas be seen from Table 2.4 that a large majority of the households, both at the state and district level, are living in one and two rooms. It is only a small minority of households which live in houses of three or more rooms.

The households living in one room account for 39.3 percent of the total households in the State. At the district level this proportion varies from 14.7 percent for Srinagar district to 75.2 percent for Rajouri district. In the case of Jammu province, the proportion of households living in one room ranges from 54.8 percent for Poonch district to 75.2 percent for Rajouri district. It exceeds 60 percent in the case of Jammu, Kathua and Rajouri districts. Compared to this, the position in Kashmir province and Ladakh district is far better. Less than one-fifth of the households in Kashmir province and Ladakh district live in one room houses.

Table 2.4

Perccntage Distribution of Censes Households by number of Rooms Occupied 1971

State/District	*One room*	*Two rooms*	*Three rooms*	*Four rooms*	*Five rooms*
Jammu and Kashmir	39.3	28·4	13·7	9·7	8·8
Anantnag	19·5	36·2	17·4	15·1	11·8
Srinagar	14·7	30·6	20·4	16·1	18·2
Baramulla	16·2	34·5	18·6	16·6	14·1
Ladakh	18·3	28·7	20·8	13·6	18·6
Doda	57·1	24·8	9·1	4·6	4·3
Udhampur	59·6	25·6	9·7	3·1	2·0
Jammu	65·7	21·3	7·6	3·0	2·4
Kathua	64·8	21·6	8·5	3·1	2·0
Rajouri	75·2	18·6	3·8	1·4	0·3
Poonch	54·8	30·9	9·2	3·4	1·6

Source : Computed from *Census of India, 1971, Housing Report and Tables* Part IV series 8, *Jammu and Kashmir*, pp-146-7

Households which occupy two rooms account for 28.4 percent of the total households in the State. The proportion of such households at the district level varies from 18.6 percent in the case of Rajouri to 36·2 per cent for Anantnag district. The common pattern observed in the case of households living in one room applies to households occupying two rooms. Districts forming Kashmir province have a higher proportion of households with two rooms than is the case with Jammu province. Poonch district is the only exception in Jammu province where the proportion of households with two rooms exceeds the state average. There is no district in Kashmir province where the proportion of such households is below the State average. Same is the case with Ladakh district.

Taken together, households occupying one and two rooms, account for 67.7 per cent of the total households in the State. In absolute terms, 3,01, 369 households in the State occupied only one room in 1971. Of these the rural households numbered 2,70,083. Those occupying two rooms numbered 2,18,342 and of these 1,83,563 households were living in the rural areas of the State.[5]

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5. See *Census af India, 1971, Housing Report and Tables*, op. cit., p. 143.

At the district level, the proportion of households with one or two rooms varied from 45·3 percent in Srinagar district to as high as 93·8 percent in Rajouri district. In the case of 6 districts of Jammu region over 80 percent of the households occupied one or two rooms. Compared to this the proportion of such households in Srinagar, Anantnag, Baramulla and Ladakh districts did not exceed 56 percent. Thus in Jammu province a large majority of the households are crowded in one or two rooms only.

Now consider the case of households occupying three or four rooms. For the state as a whole, 13·7 percent and 9·7 percent housholds in 1971 occupied 3 and 4 rooms respectively. Thus it is less than one-fourth of the total households who had the privilege of occupying 3 or 4 rooms.

It was found that percentage of household occupping 3 or 4 rooms in the districts of Jammu region was less than 10 percent while it exceeded 10 percent in the districts of Kashmir and Ladakh region.

Households occupying 5 or more rooms in 1971 accounted for 8.8 percent of the total households in the State. This proportion at the district level varied from 0·3 percent in the case of Rajouri to 18·6 percent in Ladakh. Here again, it may be remarked that in the districts of Jammu province the proportion of such households is much below 5 percent compared to over 10 percent in Kashmir province.

The above analysis of the distribution pattern of households by number of rooms occupied makes it very clear that the magnitude of the housing problem in the areas cf Jammu province is much more acute than is the case with Kashmir and Ladakh sub-regions. One possible explanation for this state of affairs could be the fact that the people in Kashmir and Ladakh are complelled to pay greater attention to housing as a basic protection against the severities of extreme winters to which they are exposed. The relatively favourable position in respect of number of rooms per household in Kashmir province could also be due to the fact that traditionally houses in Kashmir are generally two or three storeyed as against single storey houses in Jammu province.

2·4. Quality of Housing

The problem of housing is not confined to the shortage of living accommodation only. If has another dimension as well, namely, the poor quality of existing structures. A very large number of houses are badly in need of repair and reconstruction and are not conductive to healthy living.

2·4·1. Typical House Types in the State

Inspite of its small size and population the State of Jammu and Kashmir comprises very hetrogeneons, topographic and climatic sub-regions. The inhabited areas in the State range from a height of 1000 feet (305 m) to 13,000 feet (3962 m). This variation is reflected in significant climatic variations. There are areas whose climate is similar to that of plains, like very hot summers and moderate winters and others which experience hot summers and severe winters with or without snow fall. These variations have an important bearing on housing needs, design and material utilisation. In this context, it may be pertinent to quote here :—

"Beginning with Ladakh, we find in the rural areas houses constructed of mud and stone with few windows and doors, providing close resemblance to military bunkers. This is evidently due to the fact that protection must be sought against strong winds which blow in this area. Much care is not given to the stability of the roof which is flat as there is little rain or snow in the region.

Minimum temperature in the area reaches minus 23°C. In majority of cases, the ground floor serves the purpose of a cattle-shed...In the Kasmir valley, the predominant materials of construction consist of stone, bricks, thatch and timber. The roofs are triangular in shape built on trusses to facilitate snow clearance. The windows are made of two latticed leaves to allow light to pass in through paper which is pasted on them as a protection against cold during winter season. Even in a humbele dwelling there are two rooms called "Vot" and "Kani". The former is used as the main room of the family. The latter more spacious and constructed as an open hall is reserved for use in summer as well as for social functions. At other times, it also serves as a general store...In rurul areas, however, thatched roof still continues to be a common phenomenon among the general strata of people...In the Jammu region, the urban pattern of architecture is by and large the same as observed in Punjab. In mountainous parts of the region, rural houses are built in the same style as in Ladakh but have more windows and doors accounting for better ventilation. An interesting feature of houses in the Jammu region is that latrine forms an integral part of the structure and is built usually on the top of the structure"[6].

The above description of region-wise house-types indicates the broad pattern of house design and use of construction materials. The variations across the regions of the State are mainly a consequence of variations in climate, topography and availability of local materials.

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6. Ibid, pp. 9-10

However, within each sub-region the house types and their quality varies depending mainly on the local materials available for construction as also on local climatic and socio-economic conditions, as also the skill of the population in such building technology.

Apart from the design and the plan, the quality as a house, and particularly a rural house, is judged by the type of material used for constructing its main enclosing structures, *i.e.* walls and roofs.

2.4·2. Wall Materials

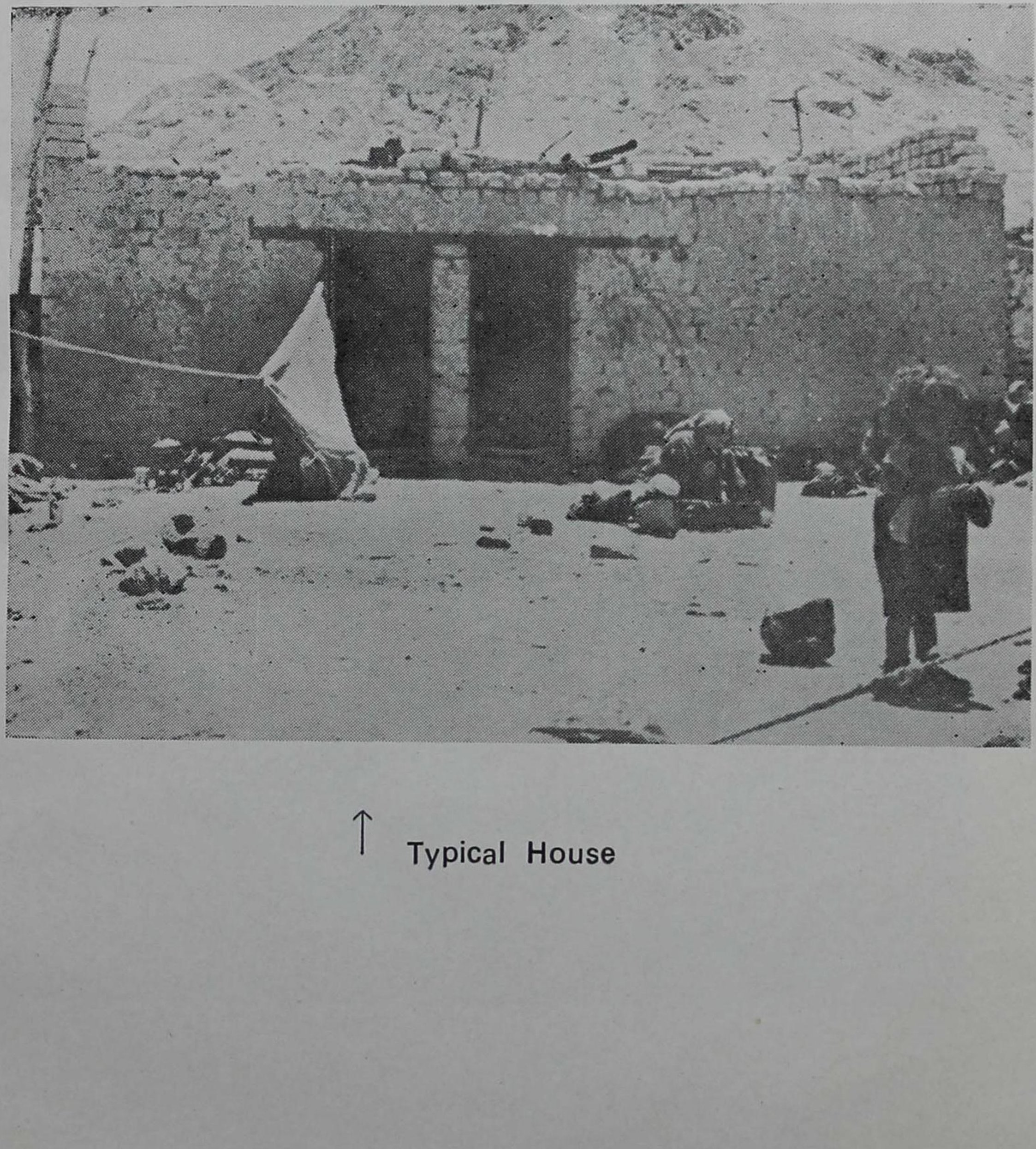
Table 2.5 shows the composition of the wall materials used in the existing houses in rural areas of the State. At the State level stone, unburnt bricks, mud, wood and burnt bricks in descending order account for the dominant materials used in the construction of walls. One-third of the rural houses in the State have walls made of stones. A little less than one-fifth of the houses have walls made each of unburnt bricks and mud. Only 15·9 percent of the houses in the State have walls made of wood. Cement and other reinforced concrete materials are not at all popular in the rural areas. The obvious reason for this is the poverty of the villagers. It is only 0.2 percent of houses which have walls made of cement.

There are significant variations in the pattern of wall materials used in different districts. The proporation of houses with walls made of stone varies from 2·1 percent in Anantnag district to as high as 95·5 percent in Poonch district. In general walls made of stone are very common in Poonch, Rajouri, Doda, Ladakh and Udhampur districts. The proportion of rural houses with stone walls in these districts works out to 95·5%, 94·2%, 86·4%, 69·0% and 68·4% respectively. This is for the simple reason that stones are freely available in the rural areas of these districts and people make full use of this free gift of nature.

Walls made of unburnt bricks are very common in the Kashmir Valley, particularly in Srinagar and Anantnag districts. The proportion of rural houses with walls made of unburnt bricks in these two districts works out to be 44% and 53.3% respectively. In Baramulla and Ladakh districts, the proportion of rural houses with unburnt brick walls is around one-fourth. Unburnt bricks are not used in any significant proportion in Jammu region. Table 2.5 clearly shows that the proportion of rural houses with such walls in no district of Jammu region exceeds 1·6 percent of the total number of rural houses.

Rural Habitat

Ladakh

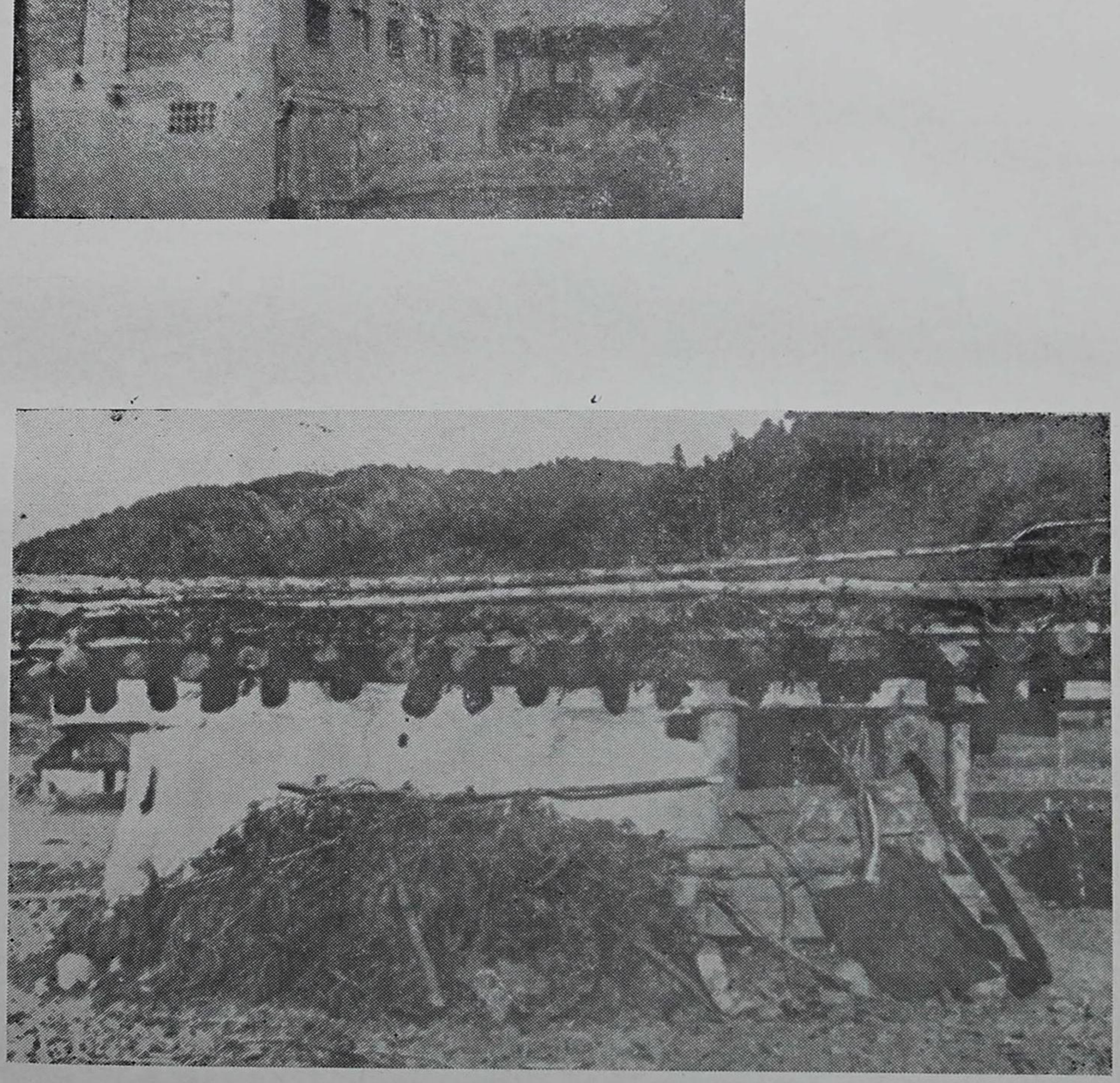


↑ Typical House

Rural Habitat

Kashmir Valley

← Typical House



↑ Gujjar Kotha

Typical Construction
(Wall & Roof)

↓ Kashmir Region

Ladakh Region ↑

TABLE 2.5

Percentage Distribution of Census Houses by Predominant Material of Walls in Rural Areas

State/ District	*Predominant material of wall*						
	Grass, Leaves reeds or Bamboo	*Mud*	*Un-burnt bricks*	*Wood*	*Burnt Bricks*	*Stones*	*Cement Concrete*
J & K State	0.5	18.5	19.7	15.9	11.3	33.7	0·2
Anantnag	0.1	2.0	53.6	30.3	11.8	2.1	N
Srinagar	0.1	5.3	44.0	25.5	21.5	3.5	N
Baramulla	0.1	1.9	22.7	39.4	16.3	19.6	N
Ladakh	0.1	0.6	27.9	0.1	N	69.0	N
Doda	0.1	1.9	0.2	10.0	1.0	86.4	0.1
Udhampur	0.1	18.1	0.3	0.4	2.3	68.4	0.1
Jammu	1.2	65.3	1.6	0.3	21.3	9.1	0.8
Kathua	2.7	59.6	1.1	0.3	11.6	24.2	0.2
Rajouri	0.3	4.0	N	0.4	1.0	94.2	0.1
Poonch	N	4.5	N	N	...	95.5	N

N for negligible

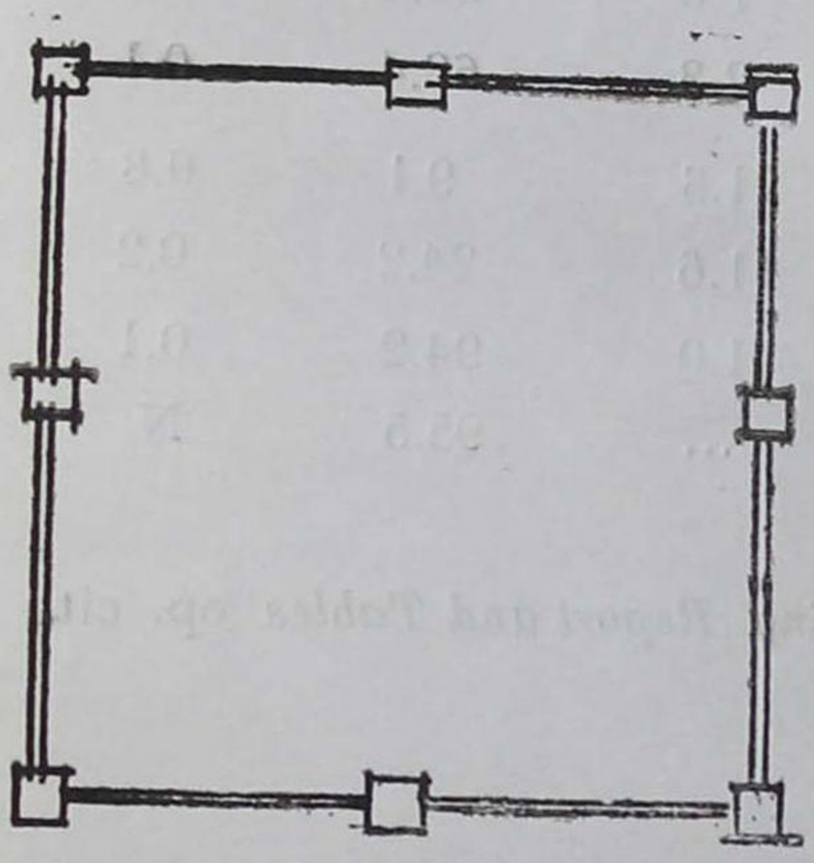
Source : Computed from *Census of India, 1971 Housing Report and Tables* op. cit., p. 137,

The next important wall material used in the rural areas of the State is mud. The proportion of houses with mud walls ranges from 0.6 percent in Ladakh district to 65.3 percent in Jammu district. Mud walls are very common in Jammu, Kathua and Udhampur districts. In the districts of Kashmir Valley mud is very rarely used for the construction of house walls. The proportion of houses with mud walls in no district of the valley exceeds 5.3 percent.

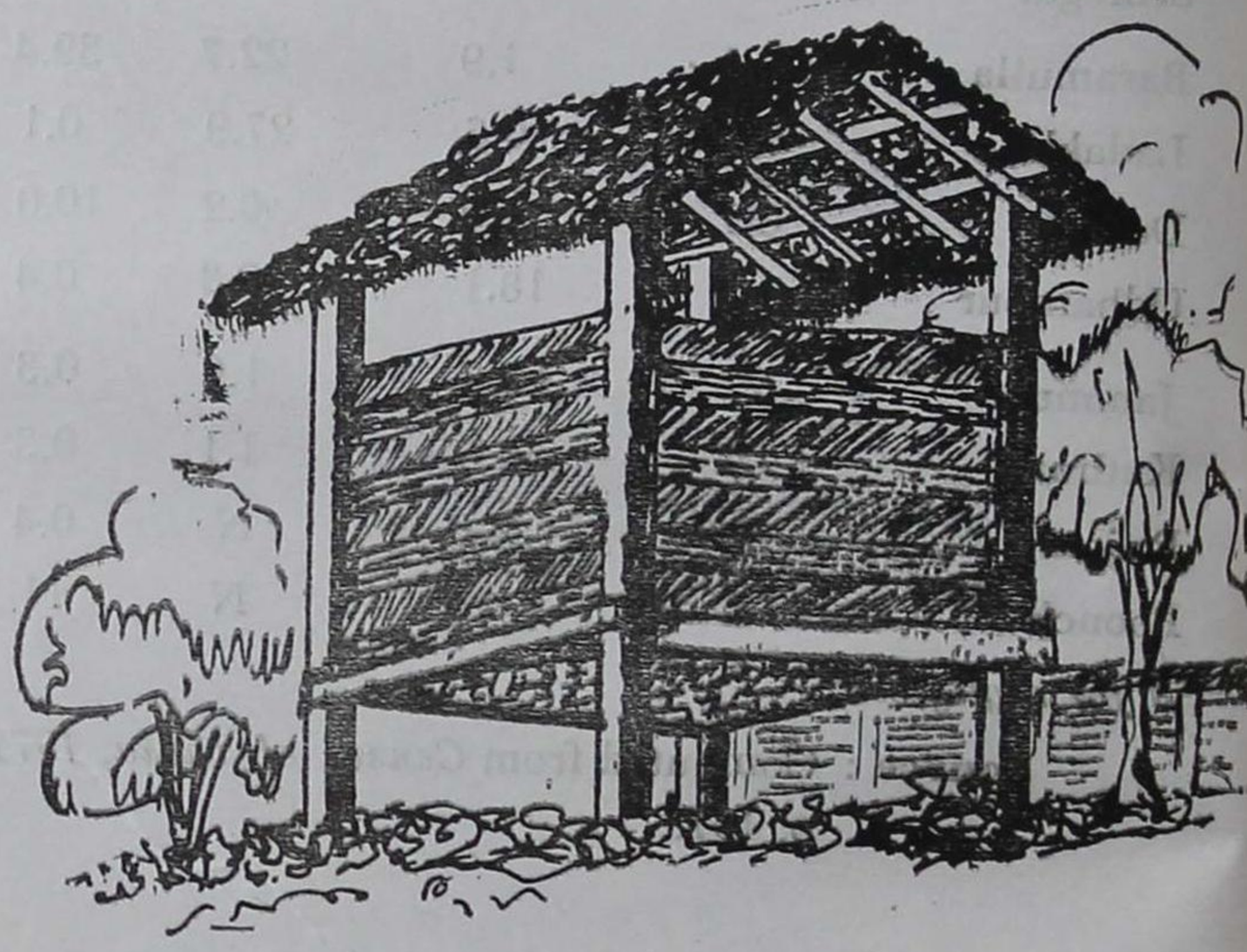
Wood is used mainly in four districts of the State, namely, Baramulla, Anantnag, Srinagar and Doda. The proportion of rural houses with wooden walls in these districts works out to be 39.4%, 30.3%, 25.5% and 10.0% respectively. In the remaining districts the percentage is much below one percent. Thus wood is mainly used in Kashmir region.

The nature of wall materials used in different areas of the State is influenced by local availability of materials, climate, building skills, and above all the cost factor and general level of living and economy of the people. In general kacha materials like mud and unburnt bricks are used mainly for reasons of economy. Their use is, therefore, a consequence of easy availability and low cost.

Although the largest number of houses in the State have walls made of stones yet this is not the proof of economic prosperity in rural areas. It is mainly the hilly districts, where stones are cheap and easily available, which account for bulk of the rural houses with stone walls. Similar is the case with bricks both burnt and unburnt. These are mostly used in Kashmir region because "the clay available in the valley is soft, easy to dig and lump into brick clods". In fact walls made of bricks are generally covered with mud to "give a face-lift to the exposed side and protect the interior of the house from cold."



PLAN

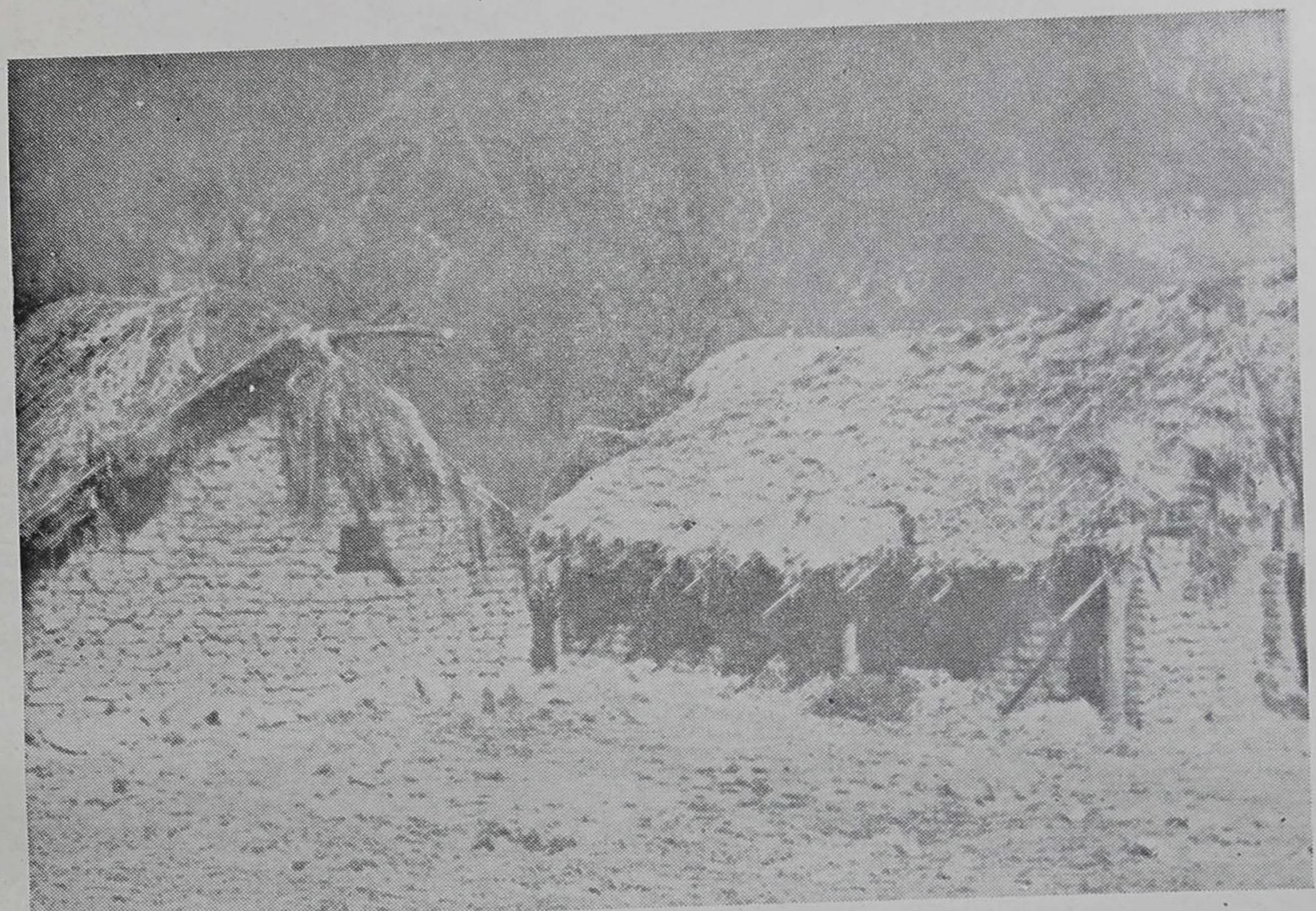


PERSPECTIVE VIEW

A VILLAGE Kothar (GRAIN STORAGE ENCLOSURE) IN KASHMIR

A very high proportion of rural houses with wooden walls in Kashmir valley is due to the fact that "Kothars" made mostly of wood to store food grains are included in the census houses. Besides, houses in certain hilly areas have generally walls made of timber only. Heavy use of mud for the construction of walls in certain areas of Jammu region is like-wise a consequence of the poverty of the people who cannot afford to buy bricks. The

Typical Construction
(Wall & Roof)



↓ Kashmir Region ↑

modern materials like reinforced cement concrete walls are beyond the reach of the rural people and this explains why such houses are almost non-existent in the rural areas of the State.

2.4.3. Roofing Materials

Roof constitutes an integral and important part of the house. The quality of a house would depend considerably on the nature of materials used to protect the residents against rain, cold, wind, snow etc. Table 2.6 gives a detailed account of the dominant roof materials used in different rural areas of the State. Grass, leaves, reeds, thatch, wood, mud, unburnt bricks or bamboo are the most important roof materials used in the existing rural houses. These materials together account for 91.2 percent of the total house roofs in rural areas of the State. A similar position emerges even at the district level. About 90 percent or more of the rural houses in 9 out of 10 districts in the State have roofs made of grass, leaves etc. The only exception is Srinagar district where also three-fourths of the rural houses have roofs made of such materials.

Table 2.6

Percentage Distribution of Census Houses by Predominant Roof Material in Rural Areas (1971)

	Predominant material of roof		
State/Distt.	*Grass, leaves, reeds, thatch, wood, mud, unburnt bricks or bamboo*	*Tiles, Slates, Shingle*	*Corrugated Iron, Zinc or other metal sheets*
J & K	91.2	3.1	4.5
Anantnag	92.0	3.4	4.5
Srinagar	74.1	10.1	15.7
Baramulla	88.0	5.2	6.7
Ladakh	97.2	0.1	0.3
Doda	98.7	N	0.8
Udhampur	95.2	0.1	2.9
Jammu	92.4	3.3	0.8
Kathua	89.8	2.1	5.1
Rajouri	98.4	N	0.2
Poonch	99.7	N	0.2

N for Negligible.

Source : Computed from Census of India 1971, *Housing Report & Tables**

*op. cit, p. 139

The other somewhat important roof materials used in rural areas of the State are corrugated iron, zinc or other metal sheets and tiles, slate and shingle. The proportion of rural houses with roofs made of these two types of material groups work out to be 4.5% and 3.1% respectively. These types of roof materials are mostly used in Srinagar district. For example, 15.7 percent of rural houses in Srinagar district have roofs made of corrugated iron, zinc or other metal sheets. In the remaining districts of the valley this proportion does not exceed 6.7 percent. In the Jammu region, the proportion of rural houses with such roof materials exceeds one percent in two districts only, namely, Kathua and Udhampur.

Tiles, slates and shingle together account for 3.1 percent of the house roofs in rural areas of the State. Their proportion is the highest in Srinagar district were 10.1 percent of the rural houses have roofs made of these materials.

Although the use of roof materials like that of wall materials is influenced considerably by climate and local availability, yet it gives an indication of the economic well-being of people. Heavy dependence on thatch as a roofing material in the villages of the valley of Kashmir and on mud in Jammu Province is primarily a consequence of the poverty of villagers. These materials are quite inferior and adversely affect the quality and durability of houses. It is not yet possible to substitute these by more durable but expensive materials like metal sheets, tiles or even shingle.

Thatch roofs in the villages of Kashmir are a major cause of frequent fires particularly during the dry season. In the Jammu province, mud roofs become a major problem in facing the challenge of heavy showers during summer months. But these inconveniences shall have to be borne by the villagers until they can afford better quality roof materials or at least till these inferior materials are improved and made more durable and fire proof by intensive research.

From the facts and figures regarding material composition of walls and roofs referred to above it follows that a large majority of the rural houses in Jammu and Kashmir State are "Kacha" houses of very poor quality and made mainly from inferior materials. Not to speak of providing a healthy and wholesome living condition, these ramshackle structures hardly gurantee any protection to the poor villagers against excess heat, cold, rain, wind and snow.

2.5. Environmental Planning

Another dimension of the rural housing problem is the lack rather the total absence of environmental p lanning and haphazard growth of clusters of houses in the villages of

the State. There is hardly any provision for sanitary latrines, waste disposal, public drinking water and so on, Our village environment is naturally being increasingly polluted. These problems become more acute now as most of the waste lands are brought under cultivation.

Another aspect of the problem is the lack of any planning in the construction of house clusters. There are no bye-law regulations to control house building activity in the villages. Every villager feels free to select any site he likes for constructing his house. This leads to congestion which apart from creating an unhealthy environment for living also exposes the entire village community to the frequent hazards of devastating fires. Further, no provision is left for construction of foot-paths, drains and other public conveniences.

2.5.1. Introduction

The valley of Kashmir comprises an area of 14,247.1 Sq. Kms in the Northern Himalayan region of India. It is one of the best known tourist attractions in the world, famed for its natural beauty of lakes, mountains, splendid forests, and the large number of hill streams criss crossing the valley at several beautiful locations.

In a setting like this, it is incongrouous to the eye to see the damage caused to the environment by the haphazardly built human habitats studding the whole valley like eye sores, and detracting the onlookers attention from the beauty and bounties of nature lavishly provided in the lovely landscape. Apart from the fact that such a situation is aesthetically undesirable, it is also an economic loss because the best potential of tourism as a means of income is not fully realized under such conditions. Also the quanta of human happiness and good health are low. Inspite of better production on the farms, the farmer usually retires at the end of the day of hard work to an insanitary medieval hut without a single amenity.

Such a situation should be rectified as speedily as possible within the given constraints of the situation in terms of socio-economic and political factors. Given the necessary will, proper planning, and expeditious decision making this objective can be achieved by taking an integrated view of the entire gamut of factors related to human occupation and living on the one hand and the availability of natural resources including man power resources on the other.

2.5.2. Present Status of Rural Habitats

The segment of population living in predominantly rural-agricultural areas of Kashmir is 81% of the total population as per 1971 census.

However, unlike most other states in India the valley of Kashmir, situated in the Northern cold regions of the country has the distinction of having no rural poor without a place to sleep under a roof. The reasons for this are not far to seek.

Over the centuries simple, economical house building techniques have been evolved out of sheer necessity.

The law of instinct for survival demands that in extreme cold temperatures going down to—13°C sometimes, and heavy snow falls, no human being could live anywhere except under a properly covered shelter.

The materials used for the purpose are entirely local and cheaply available. For example, till very recently sun-dried bricks, timber, stone and thatch were only materials needed to build a common two storeyed house. The typical house of this type comprises a couple of rooms totalling an area of about 18 m^2 in the ground floor and similar space for storage in the 1st floor, which may also be used for living in summer.

The building technique used is quite simple. It comprises dry stone masonry for the foundations, followed by massive sun-dried brick pillars built in mud and dry brick panel walls in between. Another storey is made of sun-dried brick pillars to support the inclined thatch roof. The superstructure and the plinth are separated by long timber beams serving as a frame to take care of earthquake forces. In regions where timber is readily log cabin or of available in the nearby forest, the typical timber house is evolved and built as a two-storeyed rough plank timber.

Also living of larger number of people in a single house is possible and practised. Furniture is not used. Thus a small 3 m × 3 m room which serves as a sitting room during the day is readily converted into a dormitory type bed-room by night to enable 6 to 8 people huddle together under quilts and feel better off thereby because of more warmth. The concept of nuclear families is not yet widespread in the rural areas, and this means single kitchens for many households which economise on space. Such arrangements have survived inspite of rapid development because of distinct socio-economic advantages of personal security, minimization of living expenses, better division of labour, provision of human contact and clubbing etc. So intense is the pressure of such considerations that even modern housing in urban areas by the very affluent sections of society perpetuates such traditional approach to housing needs.

This sociological factor complicates the rural habitat problem, because as the economic prosperity of the rural population improves the tendency to build new homes on

the old models remains. The only difference is that mud-brick is replaced by kiln brick, mud morter by lime or even cement mortar, thatch by galvanized iron sheets, ordinary timber by costly timber and, of course, the number and size of rooms is lavishly increased. Some modest furniture in a couple of rooms is also introduced. If rural electrification is available then a T.V. set and antenna are introduced too. The surrounding filth of the village is of no consequence, the poorer huts remain and the habitat looks as poor, insanitary and even miserable as before and accentuated even more dramatically by the "mansions" of the present day in the midst of squalor. The present planning methods are to some extent responsible for the creation of such incongrouous pockets of prosperity existing side by side with considerable areas of poverty.

2.5.3. Defects of Existing Habitats

In the context of what has been described above, it would be worth while to have a look at the nature of rural habitat problem in Kashmir.

The foremost problem is that the entire rural housing is built haphazardly practically anywhere in an area separated from the cultivated lands. When "natural" men sit together they tend to sit in a circle and if they are afraid of the enemy then they huddle together. This is precisely how the houses are "just huddled together." There is no semblance of a road or a street. The narrow lanes between houses are unmarked strips, only good enough for a single person to walk through. Since bullock carts are rarely used on the hilly terrains the lanes are not good enough from that consideration too.

Secondly, the houses themselves have many defects. These include improper lighting, poor ventilation, lack of sanitary facilities, dampness, huddling together of spaces used by humans as well as animals (this is often found convenient for providing well needed heat in the winter, the main living room being either just above or by the side of the stable from where hot air from the stable is passed through the living room). Fire hazard is a major and recurring problem of these habitats.

Thirdly the room space available per head is woefully inadequate for proper hygenic living. On the basis of 1971 census records the average occupancy of residential house varies from 6 to 8 persons. In terms of superficial area used per person it works out to slightly less than 3 m^2 per head on an average, whereas a decent living norm would be around 15 m^2 per head. This problem has been further aggravated by the fact that population increase has been more rapid than the corresponding rise in the number of houses. Thus whereas better provision of food and clothing has increased population, the standard of living and of housing in particular has deteriorated. Considering on one hand the enormities of the

problem, both in respect of quality and quantity of housing and village planning, as discussed above, and on the other, the and limited material and other resources with which this challenge is to be met, it will be too optimistic to believe that the plight of millions of houseless rural poor of our country in general, and J & K State in particular, will be mitigated in a foreseable future. Not many and certainly no soft options are open to us for solving this problem. Hard decisions will have to be taken and implemented if a significant and meaningul progress in solving the problem of housing is to be achieved in a reasonable time. What planning policies should broadly be adopted to arrive at these decisions and what strategies should be followed to implement these decisions in a logical and effective way, form the subject matter of chapters that follow.

Grass Igloo

A Shelter for poor in a Kashmir Village

3

Plans for Rural Housing in Jammu, Kashmir & Ladakh

3·1. Approach to Problem Solution

The analysis of the nature and magnitude of the problem of rural housing in J & K State described in the preceding chapter enables us to identify four major dimensions of the problem ; (*i*) the quantity of housing, (*ii*) quality of housing (*iii*) village and environmental planning and (*iv*) building technology.

A large number of rural households in the State are facing an acute shortage of living space. Their houses comprise a room or two and naturally the living space per person is quite inadequate and not conducive to healthy living. There are also households who do not even own any dwelling.

The quality of houses in general is far from satisfactory. This is the case not only with old houses which need repair or even reconstruction but also of the newly built houses. One of the main reasons for this poor quality of houses in the rural areas is lack of proper housing designs and a habitual dependence on use of conventional materials and methods of construction. Suitable modifications in designs and building practices can help in effecting considerable improvements in the quality of housing.

Finally, there exists a total lack of village and environmental planning in our villages. There are no building bye-laws to control the construction activity and ensure an orderly growth of village habitat. The villagers construct their house where-ever they can afford, and this leads to congestion and haphazard growth of clusters. There

are no sufficient fire gaps, so essential with thatched roof, between houses and incidence of huge fires in our villages is not infrequent. Further, there is no provision for proper streets, paths, drainage, plantation etc.

On account of these many and varied dimensions of the housing problem its solution is not an easy task. The paucity of funds and the scarcity of building materials add to the difficulties of the problem. It should be obvious that for any meaningful solution to be found, the problem should be clearly stated in all its aspects. The main objective that can possibly be achieved keeping in view the constraints and limitations should be clearly defined. In other words all the myriad factors associated with the problem of rural housing should be fully considered to formulate a proper plan and evolve workable strategies for meeting this vital need of the many houseless poor living in our villages. The present chapter is an exercise towards formulating such a plan.

A "plan" is a systematic attempt to decide how the resources of a country or a region should be allocated to achieve desired objectives in a specified period of time The planning strategies to be adopted to achieve these objectives will to a large extent depend on the constraints of resource availability. The plan must, therefore, clearly define the objectives, identify and appreciate the constraints and lay down the strategies to be adopted.

3.2. Objectives of Planning for Rural Housing

3.2'1. Gandhian Approach

The overall objective of any rural housing plan should be to improve the conditions of living of the people by providing them houses which are conducive to healthy living. The concept of improved living condition is, however, closely related to the resource availability and other socio-economic constraints operating within a given region and will have to be accordingly defined. For the conditions of rural India the good housing conditions that should be obtained in our villages can be best stated in the words of Mahatma Gandhi :—

"An ideal Indian village will be so constructed so as to lend itself to perfect sanitation. It will have cottages with sufficient light and ventilation built of materials obtainable with a radious of 5 miles. The cottages will have courtyards enabling the holders to plant vegetables for domestic use and to house their cattle. The village lanes and streets will be free from all avoidable dust. It will have a workshop for all....Also a common meeting place, a field common for grazing cattle, a cooperative dairy, primary and secondary schools in which basic education will be central part and will have panchayats for settling disputes. It will produce its own grains, vegetables and fruits and its own khadi."

3·2·2. Quantitative Aspect of Planning Objectives

Considering the enormous poverty of our country, a neat and tidy cottage made of cheap locally available materials for every household of our villages, which even Gandhi must have had visualized as a modest and realistic goal, looks a tall and a very difficult order today. Accepting, however, this minimum objective of a cottage to every household for purpose of planning, the question to be settled next is what should be the minimum size of cottage to meet the basic requirements of our rural households ?

This minimum accommodation need of a household will depend upon various socio-economic and climatic factors e.g. the size and composition of a household, social customs, climate, income and occupation of the household. These basic standards in housing and planning shall, therefore, be defined not only from considerations of cost but also from consideration of creating the desirable sociological and physical environment.

Many national and international professional organisations have dealt with this question of minimum accommodation needs and have recommended criteria for determining the size of a house.

According to American Public Health Association (A.P.H.A.) the cubic space of a house per occupant should be 400 cubic feet (11.33 cubic metres). This estimate is based on a sufficient provision in the sleeping rooms to minimise the danger of contact infections and also provides an atmosphere of reasonable chemical purity. It assumes an air-changing span of 10 cubic feet (0·28 cubic metre) per person per minute and allows 50 square feet (4·65 square metres) per bed and 6 feet (1·83 metre) betwcen centres of adjoining cots for preventing communicable diseases by dissemination of mouth spray from an infected occupant[1]. These estimates of A.P.H.A. are not very realistic even from American standards, not to speak of the developing countries where even the very well-to-do sections of population cannot afford such spacious accommodation.

According to Ekistics (September 1974 issue) one room per person has been suggested as the basic minimum for decent living[2]. This estimate, like the one referred above is very much on higher side for the prevailing conditions in India.

The Environmental Hygienic Committee has recommended a two room house as the basic requirement of a family[3]. This estimate seems somewhat realistic as it may not be

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1. Estimates quotcd in "*Report of the Development Group of Low Cost Housing Including Minimum Economic Specifications*" (N.B.O., Government of India. New Delhi, 1977), p. 23.
2. Ibid. P. 22
3. Ibid. P, 22

very difficult to ensure such an accommodation for all the households in a country. No recommendation has, however, been made by this Committee regarding the sanitary and other facilities.

The U.N. Technical Mission on Housing recommended that the minimum requirements of a household would be a two room house with adequate sanitary and other facilities to ensure healthy living. Various other committees and agencies have also agreed with the above estimate. It is, however, emphasised that no further compromise is possible in so far as the housing needs of the masses are concerned. "These standards cannot be lowered, whatever be the community, whatever be its location and whatever be the economic situation in the country".[4]

In view of the limitation of resources, the National Buildings Organisation has suggested a two-stage strategy to the solution of housing problem in our country. In the first stage the objective should be to meet the basic minimum necessary housing needs. According to N.B.O. estimates the first basic housing needs consist of a dwelling with a minimum accommodation of "one living room, one multi-purpose room with cooking space, a bath and W.C" for a family of five. This estimate of basic housing requirements for a household of 5 members though modest is also difficult to achieve in the near future.

Once these initial minimum requirements of housing are ensured for all the citizens, the second stage strategy should be to upgrade this first stage basic to a "house consisting of 2 living rooms, a kitchen, a bath and a W.C".[5] This estimate is not much different from what has been recommended at various international forums also.

India being a vast country with different regions exhibiting diverse socio-economic and environmental patterns, the N.B.O. and other national standards, need to be carefully examined in the light of these regional peculiarities and if necessary modified to suit them.

In respect of Jammu and Kashmir State, the region under study, which is situated between 32°—15′ and 37°—5′ north latitude and 72°—40′ and 80°—30′ east longitude, again no single minimum housing standard can be prescribed for its three principal sub-regions, namely, Kashmir, Jammu and Ladakh. This is for the fact that the social, cultural, economic, environmental and climatic conditions prevailing in these

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4. See Ibid, P. 22

5. Ibid, P. 24

sub-regions of J & K State are distinctly different from each other. Owing to these diversities at sub-regional level, it becomes necessary to carry out the exercise of fixing norms for housing separately for each of these three sub-regions. One of the most important factors that distinguishes the three sub-regions of the J & K State and significantly effect the type and-design of houses in these sub-regions is climate. In fact most house types in these sub-regions represent a mere "Shelter approach"—shelter against weather—as to be only expected from people who just manage life from hand to mouth.

3·3. Minimum housing needs for Kashmir Valley

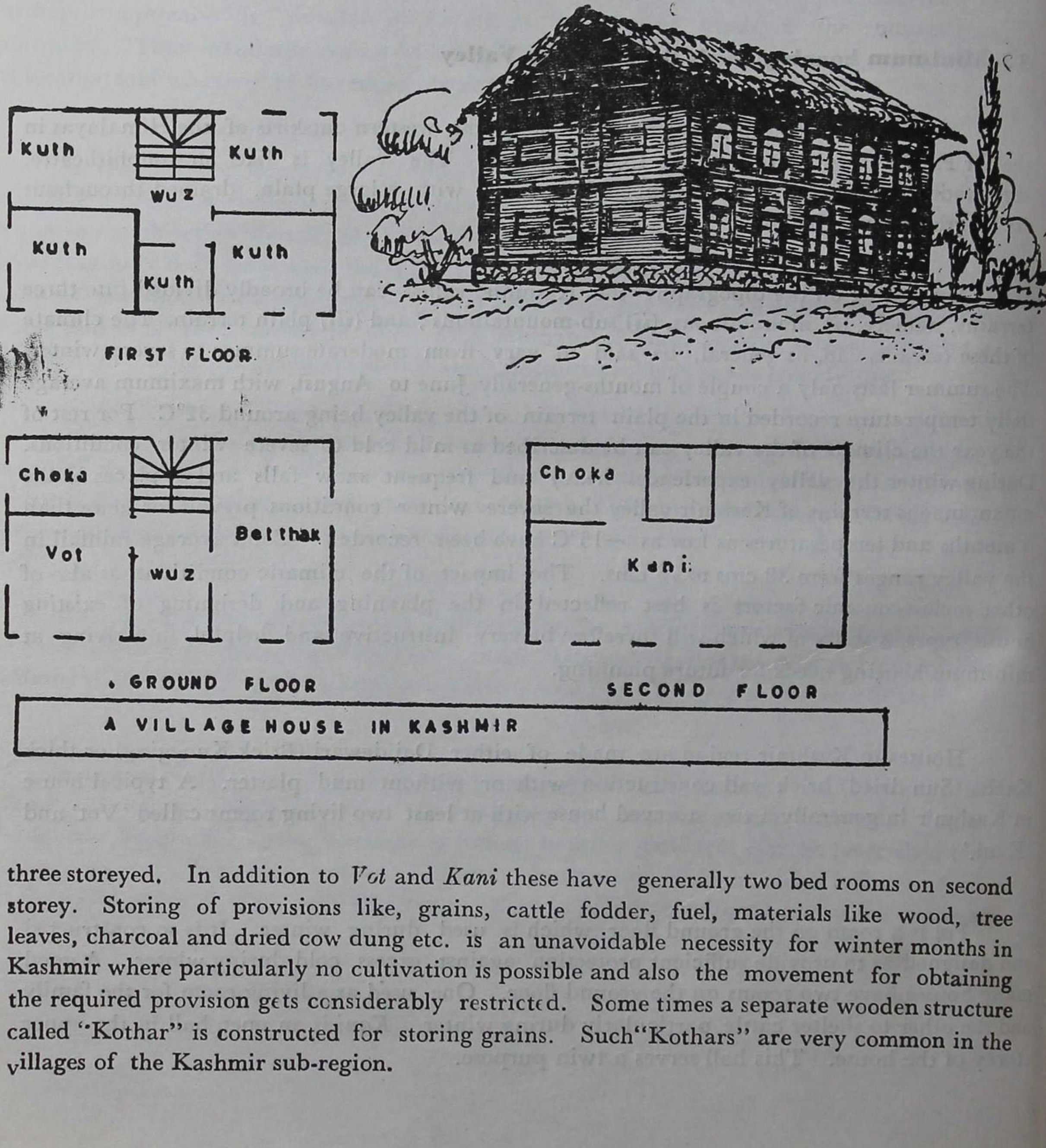
The Valley of Kashmir is situated among the western outskirts of the Himalayas in the Pir Panjal range. Its area is 15,853 sq. kms. The valley is like an amphitheatre, surrounded on all sides by snow-capped mountains, with a large plain, drained throughout its length by river Jhelum.

Depending on the topography the Kashmir valley can be broadly divided into three terrains, namely, (*i*) mountainous, (*ii*) sub-mountainous ; and (*iii*) plain terrain. The climate of these terrains can, in general, be said to vary from moderate summer to severe winter. The summer lasts only a couple of months-generally June to August, with maximum average daily temperature recorded in the plain terrain of the valley being around 32°C. For rest of the year the climate of the valley can be described as mild cold to severe winter conditions. During winter the valley experiences heavy and frequent snow falls and at places in the mountaneous terrains of Kashmir valley the severe winter conditions prevail for more than 6 months and temperatures as low as −15°C have been recorded. Total average rainfall in the valley ranges from 38 cms to 76 cms. The impact of the climatic conditions, as also of other socio-economic factors is best reflected in the planning and designing of existing house types, a study of which will therefore be very instructive and helpful in arriving at minimum housing needs for future planning.

Houses in Kashmir region are made of either Dajidewari (Brick Knogging) or thick Kacha (Sun dried) brick wall construction with or without mud plaster. A typical house in Kashmir in generally a two storeyed house with at least two living rooms called 'Vot' and 'Kani.'

Vot is a room on the ground floor which is used during winter. It is so constructed and designed as to provide sufficient protection against excess cold during winter. A good many houses have two rooms on the ground floor. One used as a living room for the family and the other to shelter cattle particularly during winter. *Kani* is an open hall in the upper storey of the house. This hall serves a twin purpose.

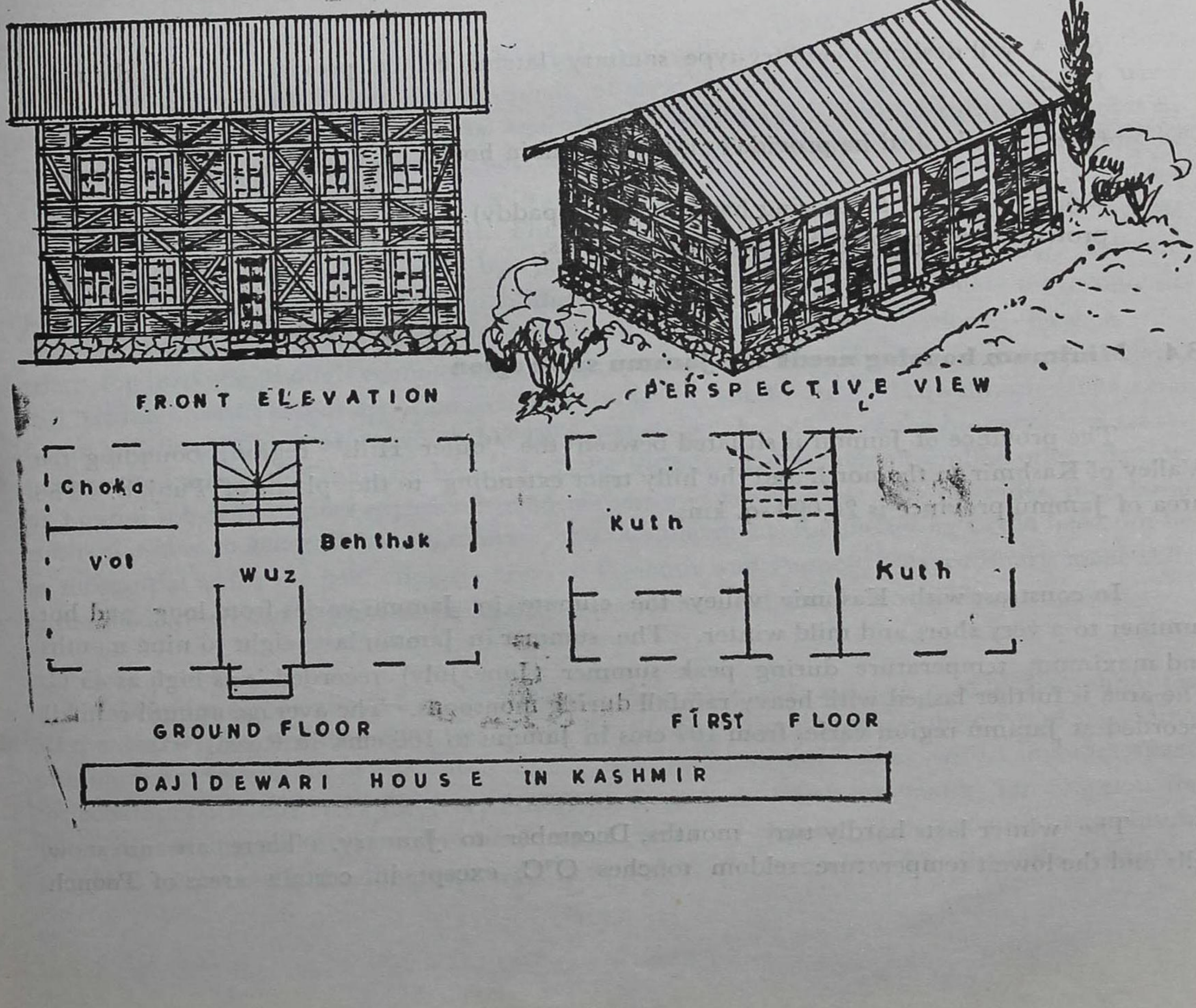
During summer, *Kani* is used as a living room and in winter it serves the purpose of a big store. The number of stories in a house is indicative of the economic condition of the household. The weaker sections of rural population have generally a two storey house comprising two to three rooms, the slightly better offs have a three storey house with about five rooms. Quite a good number of houses in the rural areas of the Kashmir valley are



three storeyed. In addition to *Vot* and *Kani* these have generally two bed rooms on second storey. Storing of provisions like, grains, cattle fodder, fuel, materials like wood, tree leaves, charcoal and dried cow dung etc. is an unavoidable necessity for winter months in Kashmir where particularly no cultivation is possible and also the movement for obtaining the required provision gets considerably restricted. Some times a separate wooden structure called "Kothar" is constructed for storing grains. Such "Kothars" are very common in the villages of the Kashmir sub-region.

According to 1971 census over four-fifths of the rural households in the Kashmir valley were occupying more than one living room. The proportion of rural households occupying only one room in the three districts of the valley in 1971 stood at 20·5% in Anantnag, 19·1% in Srinagar and 16·8% in Baramulla compared to 42·7% for the State as a whole.

In light of housing needs and existing house types in the Kashmir Valley, as pointed out above, the N.B.O's first stage target of minimum accommodation of one living room and one multipurpose room for a family of five appeares quite inadequate. Also the fact that the average size of household according to 1971 census in Kashmir Valley is more than six as against a family of five as envisaged by N.B.O., calls for a further upward revision in the minimum accommodation needs of an average household of the Kashmir Valley. All these



DAJIDEWARI HOUSE IN KASHMIR

things considered, it looks that the accommodation required to meet the basic minimum needs of an average household of six members in the rural areas of Kashmir valley should consist of :—

(*i*) A two storey house having at least two living rooms one on each floor.

The rooms on the ground floor *Vot* must be designed and constructed to serve as comfortable living rooms during winter.

The rooms on the top floor, *Kani* must suit the summer condition and should be quite big in size to serve as a store room during winter.

As is the custom now both *Vot* and *Kani* must be provided with a cooking space.

The design of the house must provide for a smalll bath room space in the ground floor.

(*ii*) A well designed country-type sanitary latrine to be provided outside the main house.

(*iii*) A cattle shed be provided outside the main house.

(*iv*) A "Kothar" for storing harvest crop (paddy). This space must be designed to protect stored crop against moisture and rats.

3.4. Minimum housing needs for Jammu sub-region

The province of Jammu is situated beween the "outer Hills" region, bounding the Valley of Kashmir in the north and the hilly tract extending to the plains of Punjab. The area of Jammu province is 26,090 sq. kms.

In constrast with Kashmir valley the climate in Jammu varies from long and hot summer to a very short and mild winter. The summer in Jammu lasts eight to nine months and maximum temperature during peak summer (June-July) recorded is as high as 45°C. The area is further lashed with heavy rainfall during monsoons. The average annual rainfall recorded at Jammu region varies from 107 cms in Jammu to 166 cms. in Reasi.

The winter lasts hardly two months, December to January. There are no snow falls and the lowest temperature seldom touches O°C, except in certain areas of Poonch

and Doda districts which do experience snow fall and cold winters. In these areas the norms for housing needs will be closer to those fixed for Kashmir valley than for Jammu sub-region.

It is perhaps because of these mild winter conditions that the need for very elaborate housing is not felt as acutely in Jammu region as is felt and faced in Kashmir valley. Unlike in Kashmir valley, in Jammu the cultivation is done even during winter months and because of its proximity and easy accessibility to other market areas, there is little need of storing large stocks of grain and other household provisions.

There is thus little use for a big room like *Kani* and 'Kothars' in a Jammu house. That is why 'Kothars' or such like structures which are a common sight in the rural areas of Kashmir are rarely found in Jammu province and houses in its rural areas are generally single storeyed.

A typical village dwelling in Jammu is generally a single storeyed and single room house. According to 1971 census, two-thirds of rural households in Jammu sub-region were living in single roomed dwellings. As against this less than a fifth of rural households in Kashmir valley were living in single roomed houses. At the district level the proportion of rural households in Jammu province with one room accommodation varies from 55 percent in Poonch to 76·32 percent in Rajouri. The proportion of such rural households is the highest in Rajouri district (76·3%), followed by Jammu district (72.3%), Kathua (66·1%), Udhampur (62·2%) and is the lowest in Poonch district (55%). These figures reflect the economic and social conditions of the people as also the impact of climatic conditions. Poonch district, for instance, though economically the poorest of all other districts in Jammu region, still has the lowest percentage of households living in single roomed dwellings. The need for an additional living room which has been exhibited by 45% of the households must represent the impact of climate on housing needs in Poonch area which, unlike other districts of Jammu sub-region, does experience cold winters and heavy snow falls. Besides, in Jammu sub-region due to generally warm climate the arrangement for sheltering cattle need not be as substantial as for the cold climatic areas of Kashmir and Poonch. An ordinary make shift cattle shed which can protect cattle against occasional wind and rain will do.

Considering the above facts and also the fact that the average size of household for all the districts, except Poonch is less than six persons, the first stage objective of providing minimum accomodation of one living room, one multipurpose room which includes space for cooking, bath and W.C. for every family of five, looks very reasonable for adoption for planning housing programmes in most rural areas of Jammu. In fact such a minimum standard of 2 roomed dwelling unit with bath and W.C. when viewed in the light of existing

conditions, that is of more than sixty percent living in single roomed dwellings, looks liberal and if actually provided will mean a big relief for the people of this sub-region.

The minimum accommodation that ought to be provided for every household in the rural areas of Jammu region except for certain areas in Poonch and Doda districts, should therefore be as per N.B O's recommendation, *i.e.* :—

(*i*) one living room,

(*ii*) one multipurpose room, which includes space for cooking, bath and W.C. ; and

(*iii*) one cattle-shed outside the house.

The above standards will, however, not suit to certain areas in Poonch and Doda districts which experience severe winters and record heavy snow falls. As already mentioned, the norms for fixing minimum housing requirements in these areas are likely to be closer to those fixed for Kashmir valley than for Jammu sub-region. These norms, however, should be determined after carrying out a detailed field survey for the areas concerned.

3.5. Minimum housing needs for Ladakh Sub-region

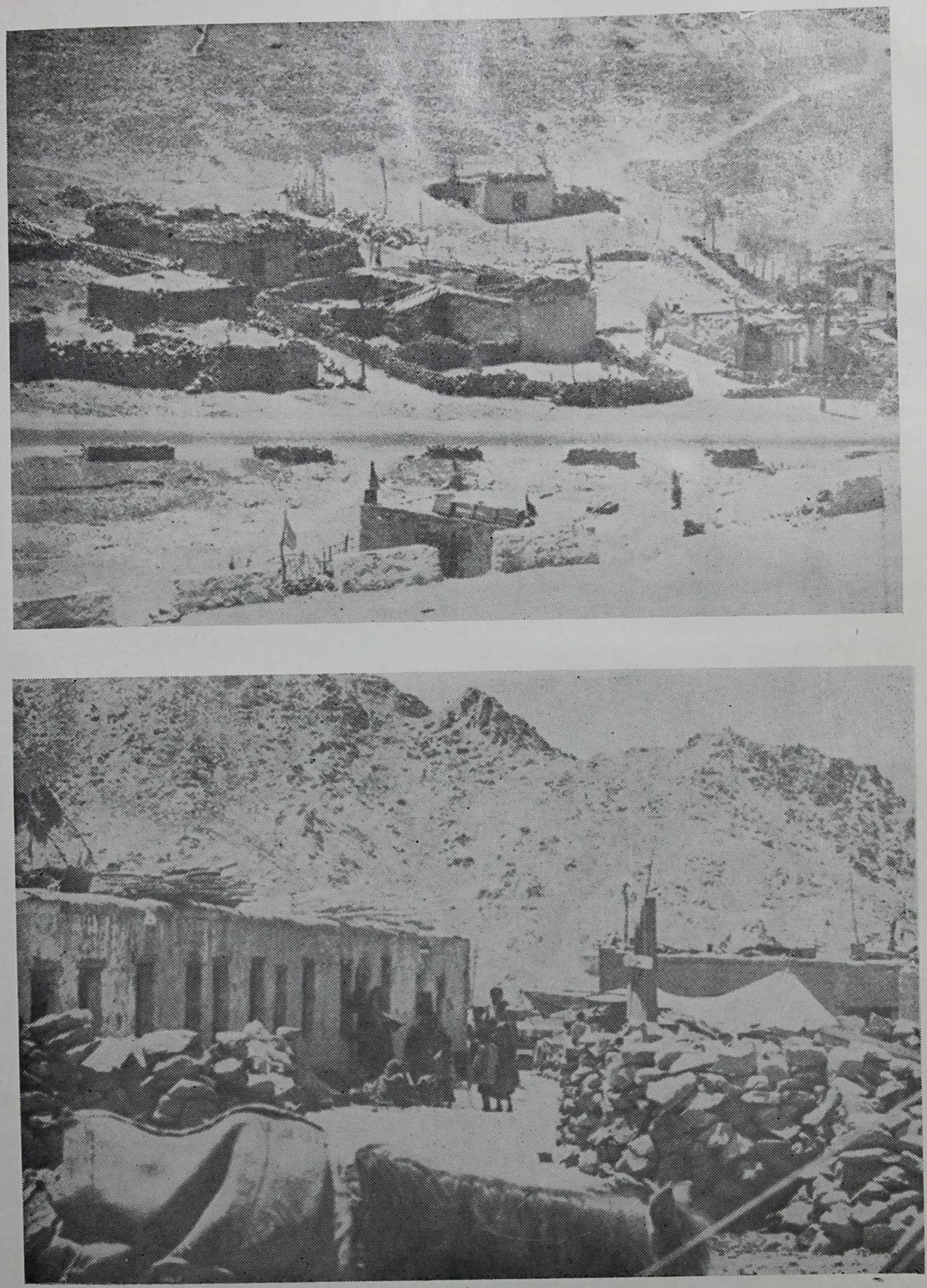
Ladakh is situated in the eastern mountain ranges of Kashmir. This is the highest range throughout the world. Its altitude varies from 2,000 metres to 6,000 metres above mean sea level. Habitation in this area is found even at the height of 4,500 metres and this belt is considered as the highest inhabited belt in the world. The area of Ladakh is 97780 square kms. which accounts for over 70 percent of the total geographical area of Jammu and Kashmir State. Due to area being mountainous and barren, it is sparsely populated. Its population in 1971 stood at 105291.

Due to its high altitude and being a plateau the climate of Ladakh is extremely cold and dry. The valleys here are hot in summer but freezing during winter nights. The average daily minimum temperature recorded in Leh, during January is as low as—13.5°C and the average annual rainfall is about 8 cms. The days are generally warm and nights very cold.

The houses in Ladakh must therefore be designed well to provide protection against severe cold. Further, as the area remains cut off except for air transport from the rest of the

Rural Housing

Ladakh



world for most part of the year due to the rugged terrain which remains inaccessible during long winter months, these houses must have adequate space to store food grains and other provisions essential to living under servere climatic conditions. It fact the need for an additional storing space in the houses of Ladakh and also for adequate shelters for cattle is even greater than for houses in Kashmir valley.

It is for the above reasons that the existing houses in the rural areas of Ladakh have generally more than one room. According to 1971 census only 3,561 rural households out of a total of 20,499 were living in single room dwellings. In other words, more than eighty percent (80%) of rural households in Ladakh are living in houses having two or more living rooms.

The average size of houses holds in Ladakh district stood at 4.70 persons, according to 1971 census. To provide adequate protection against severe cold and strong winds blowing in the area, houses here are generally single storeyed and resembling "military bunkers".

Considering the climatic and socio-economic conditions as discussed above and also the existing housing pattern which best reflects the impact of these conditions, the NBO recommendations of a dwelling having only one living and one multipurpose room as a first stage minimum objective for a family of five is quite inadequate for the basic needs of a household in the rural areas of Ladakh.

The basic needs of a rural household in Ladakh appear nearly identical with the minimum needs of a household in rural areas of Kashmir valley. Therefore, the minimum housing requirements that have been worked out earlier for a rural household of Kashmir valley could be as well adopted for planning rural housing in Ladakh sub-region, except that the houses in Ladakh will have to be single storeyed and designed to suit its peculiar climatic conditions. All these things considered, the minimum housing requirements for a rural household in Ladakh sub-region should consist of :—

(*i*) A single storeyed house with at least two living rooms. One of the rooms must be big enough to provide for cooking, bath room and storing space. The house must be well designed to provide protection against severe cold and strong winds. The existing house designs could be followed with suitable modifications in evolving new house desings ;

(*ii*) A country-type sanitary latrine situated outdoor but close to the house ; and

(*iii*) A cattle-shed.

3.6. Qualitative Aspect of Planning Objectives

3.6.1. General Approach

Having determined the minimum accommodation needs of economically weaker households in the rural areas of Jammu and Kashmir State the question to be settled next, for the purpose of planning a village habitat, is what should be the quality of this accommodation ? Keeping in view the limited resource availability in respect of both materials and money, the ever increasing demand of houses in our rural areas cannot obviously be met by building houses of cement and steel. These materials are not only expensive but also scarce. Besides, the structures of steel and concrete would not fit well to the beautiful natural landscape of our villages. It must have been in recognition of these facts that Gandhiji rightly concieved of an ideal Indian village as one which has houses of not concrete and steel but just cottages with sufficient light and ventilation built of materials obtainable within a radius of 5 miles.

However, the present sorry state of our villages particularly in respect of their housing has an altogether different story to tell. What, to Gandhiji, must have looked a very modest and an attainable target in a reasonable time remains an unaccomplished dream for the people even today after thirty years of independence.

3.6.2. Existing Condition of Rural Houses in J & K State

The latest available report of a survey of rural houses in Jammu and Kashmir State indicates that these houses, in general, besides lacking in light and air, are in an advanced stage of dilapidation. Their roofs are generally leaky and fire susceptible and walls are not durable and structurally sound.

According to 1971 census report, more than 50 percent of rural dwellings in J & K State had walls made of kacha or non-durable materials like, grass, leaves, reeds, bamboo, mud, unburnt bricks etc. and over nine-tenths of these houses have roofs made of untreated thatch and grass.

In short the condition of a large majority of the existing houses in the villages of Jammu and Kashmir is such as renders them almost unfit to fulfil even the elementary function of providing sufficient protection against rain, heat and cold to their inhabitants.

Any programme of village housing should, therefore, aim not only at providing the houseless with new houses, which besides fulfilling the minimum accommodation needs of the

household should be airy, well lighted, functionally sound, structurally safe and cheap, but also at improving wherever necessary and possible, the conditions of existing houses.

3.6.3. Objectives in respect of quality of houses in J & K State

In the light of above facts and also in view of the enormous magnitude of the housing problems in J&K State as against the very limited means for solving it, the minimum plan targets in respect of the quality of village housing that could be considered realistic and implementable should therefore be :—

(*i*) *Functional design* : The houses should be planned and designed to suit the climatic conditions of the area. The houses should be airy, well lighted and ensure good protection to their inhabitants against heat and cold.

(*ii*) *Structural soundness* : The houses should be structurally sound.

(*a*) *Foundation and plinth* : For houses to be constructed in mountainous and sub-mountainous regions of Kashmir valley and Ladakh at least second class burnt bricks or locally available stone laid in lime surkhi should be used in foundation and upto plinth.

For houses in the Jammu region the materials used above ground may be sundried bricks plastered with non-erodible mud. The foundation should, however, be made with burnt bricks or locally available stone in lime surkhi.

(*b*) *The external walls* : These may be of mud, but they should be invariably treated for water proofing. The technique of water proofing mud-walls, developed by C.B.R.I, Roorkee, could be gainfully used for village houses.

(*c*) *Roofs* : The roofs may be made from locally available thatch, dried grass and birch leaves covered with compacted earth, or in very special cases where villages are situated close to forests, these may be of even timber planks.

The roofs should be invariably treated chemically to make them water proof and rot and fire resistant. The later treatment may not be needed for roofs covered with compacted earth.

In case of thatched roofs, the fire retardant and water repellant treatment of thatch as developed by C.B.R.I. should be adopted.

The Rural Housing Wing, Regional Engg. College, Srinagar, is also engaged in research into the development of stabilized thatch shingle which will be rot proof and water proof, and fire resistant and also easy to lay. The results of this research when completed could be used to provide a good and elegant covering to our village houses at a low cost.

(*d*) *Interior walls and floors* : These should be made from locally available earth. The earth floors should be rammed well for keeping them tidy and dust free.

The washing floor space and outer verandah, if any, should be given a thin coating of lean cement concrete.

3.6.4. Village Environment

One single aspect of the village life that, over the years, has suffered the most is the village environment. Through near bursting pressure of an ever increasing population on the one hand, and the apathy of the people towards environment control and management, the village environment has been allowed to degrade to a level where it can no longer be considered conducive to a healthy wholesome life that our villages once promised. The heavens of peace and purity that our villages once where are sadly and irretrievably lost to a bye-gone past. Lack of severe administrative measures in respect of control of village housing is a serious lacuna which needs correction.

A typical village habitat in Kashmir, in fact, now looks more like, if not worse than, a city slum. As one approaches these habitats, the sight of dunghills, garbage pits, and pools of stagnant water sores the eye. These places besides being unsightly and ugly, form breeding grounds for many dangerous diseases of which village folk are frequent victims. The village paths being generally unpaved and without any arrangement for drainage are dirty during summer and slushy during rains. In the absence of building bye-laws for villages, the clusters of houses have come up wherever an open piece of land, barren or fertile could be found. Even grazing grounds, so very essential for a healthy and productive livestock, have fallen prey to building activity. The houses are generally clustered together very closely without even sufficient space as the minimum gap necessary for prevention of fire spread. There is hardly any sewage disposal system that exists for these houses. The night-soil is deposited in the open. Kitchen and other refuse pours out along with animal dung and urine from their cattle-shed to stagnate and stink in small pools outside. Few villages have a proper arrangement for water supply. Invariably villagers and their livestock use the waters of nearby streams, ponds or wells for both drinking and washing purposes. Often these waters are polluted and unfit for drinking use.

In the light of above, it is imperative that a minimum programme of action should be chalked out and implemented to not only stop further degradation of village environment but to upgrade and, if possible, restore it to its pristine quality. The planning exercise for rural development must, therefore, include the determination of the minimum goals in respect of the village environment improvement which could be considered achievable within the

limited resources of both funds and materials. Broadly speaking, these objectives should be as follows.

3.6.5. Minimum Objective for Village Planning and Environment

(*i*) *Building Bye-laws* : Suitable building By-elaws should be framed to control and regulate the building activity in the villages. This step will ensure an orderly development of village habitat.

(*ii*) *Provision of clear space* : A minimum gap of 6 metres should be provided between village houses in order to minimize the risks of fire spread and also provide an open and clean atmosphere.

Cattlesheds should be isolated from the main house by at least a gap of 6 metres. These animal sheds should generally be constructed at the extreme boundary of the compound, and should preferably be oriented in such a manner as shall help in carrying the foul odour away from the main house, with the help of prevailing winds.

(*iii*) *Sewage and Waste Disposal* : For the disposal of sewage from cattleshed and garbage and kitchen refuse etc. from the main house, a pit of about 3 sq. metres in area and having a minimum depth of about 1 metre or equal to the average depth of water table whichever is less, should be dug adjacent to the cattleshed. This refuse after getting dried and burnt can be periodically shifted from pit to the open fields and used as a cheap manure.

The drying of cowdung for conversion into fuel, as is the common practice; be done in open fields away from the main house.

Every house should be equipped with a well designed country type sanitary latrine located adjacent to cow-sheds. The designs evolved by N.B.O. for such sanitary units or any low cost design that may suit the local conditions could be adopted for this purpose.

(*iv*) *Water Supply* : To ensure a clean drinkable water supply, cheap water filtration/treatment kits instead of cottage conventional water treatment plant could be designed and installed at convenient places in a village habitat. Wells meant for supplying drinking water should be properly enclosed and no washing permitted within such enclosures. Separate man-made or natural ponds should be used for washing of cattle etc.

(*v*) *Village Paths and Streets* : These should preferably be paved with stone/gravel or any other locally available material. A minimum surface treatment of soil stabilization using local soil and an appropriate cheap stabilizing additive is recommended.

The paths should be well compacted and given a proper cross profile to ensure efficient drainage of surface water. Camber of 1 in 20 to 1 in 25 is recommended for soil stabilized paths and 1 in 25 to 1 in 30 for gravel paths etc.

The minimum width of main village paths which connect with other village road should be 3 metres.

The minimum width of other bye-lanes and paths should be 2 metres.

(*vi*) *Drainage* : Well designed, open but lined drains should be provided for draining off the storm water from roads and houses.

3.7. Integrated Approach to Rural Development in Jammu and Kashmir

Significant improvements in the quality and control of rural life can be affected by evolving an integrated approach in which the growth of all sectors of rural economy can be accelerated.

The activities of different agencies involved in the process of rural development need to be coordinated in a way which ensures balanced development of all spheres of rural life. In the pages that follow an attempt is made to examine critically the policies and programmes of rural development undertaken in the state of Jammu and Kashmir in the recent years.

3.7.1. Integrated Approach

Fig. 1. Shows an integrated view of rural needs.

It is now nationally accepted policy that alongwith the development of the economic activity of the country in the industrial sector, as well as, better production of agricultural goods by the farmer, the broader ideal of a better living in terms of certain social yardsticks like education, health, sanitation, and living amenities should be accomplished. This integrated approach to development, therefore, accords a very important place to the need for improvement of rural habitats alongside the other amenities mentioned above. As far back as 1976, the Union Government accepted this need and a special policy paper on integrated

rural development was submitted to the Parliament as part of the budget which included a provision of Rs. 15.00 crores for the purpose.

In Kashmir this approach to rural problems has been followed with visible success.

Production of wealth through economic activity in the rural sector is now being intimately geared to the needs of welfare in the rural areas. For this purpose, gainful employment of the rural population, particularly during the long winter period, is considered as an important criterion of success in the achievement of target for welfare.

A complete package of rural development in Kashmir comprises many schemes in the following areas.

Cottage industries like carpet making, shawl weaving, production of woollen khadi, embroidery work, papier machie goods are being located in villages by subsidising capital ueeds through loans by the Government and the banks.

Secondly an intensive programme of training in such crafts is being given to a vast number of rural youth, catching them young in the age group 12 to 16 years. The trainees are given stipends and are helped to set up their own units after training. The marketting needs of the producers are looked after by Government Handicrafts Department, Public Sector Corporations or corporations like the Khadi Industries Board, and Dastikar Anjuman and others.

Formal educational needs of trainees and others are provided through the vast network of schools providing free education to the youth. No child today has to walk more than 3 kms. to a Higher School, Primary Schools being located in practically every village. In order to inculcate a sense of orderliness and good living in the child at an impressionable age, the Education Department is planning to build 6000 low-cost model primary schools in the villages in the Sixth Plan period. The Rural Housing Wing of the National Buildings Organisation located in Regional Engineering College, Srinagar, is assisting to evolve suitable design for the purpose to suit the local climatic needs. The emphasis in this programme is focussed not only on the building but its proper environmental development to set an example for future needs of the village.

Rural welfare and the development of appropriate human habitats in villages are intimately linked with the health of the population. Emphasis has, therefore, been laid on the provision of potable water to all the villages. This task is being rapidly completed. Similarly the rural electrification programme is actively pursued to provide amenities and energy needs of the small scale industries. Every village is provided with a rural health centre and family planning and welfare unit for the care of mothers and children. The consciousness of family planning has taken roots in rural Kashmir because the paucity of

land is apparent to the naked eye. The Valley is bounded by hills and no vast stretches of land beckon the farmer to have a reckless attitude in regard to the size of population.

With the emphasis on agricultural production from the Third Five Year Plan period and onwards the irrigation needs, fertiliser supply, proper seeds, insectisides and pesticides, modern cultivation and production techniques of fruit growing have become widely available in rural Kashmir. The scientific attitude in this respect has taken roots even amongst the illitrate farmers. Results always speak more than anything else. The shrewed farmer is an experimental scientist who adopts the practice that shows demonstrable success. This is an important factor to be kept in mind for all rural habitat schemes.

It is in this setting that a big thrust has now got to be made in the rural habitat programme. And this must be begun where a logical beginning belongs. The undoubted need today is for total planning of the human habitat programme village by village. It is not desirable to work on many villages simultaneously. That diverts attention, delays results and success becomes difficult to achieve and demonstrate.

Here is a task which the rural population cannot achieve without assistance from outside inspite of the fact that rural surpluses may be available to be channalised into such welfare activity.

To achieve this the emphasis in economic planning has got to become work-oriented and localised to rural setting. This is a major change in outlook that is called for at the highest levels of decision making in the political and economic spheres of the Govt. It must become the proclaimed policy of the Government that within a period of time a particular number of villages shall be taken up for total reconstruction on a well planned basis. And obviously, those villages shall be taken up first where the basic infrastructure in terms of amenities, gainful employment etc. as outlined earlier shall be already in existence. In the absence of these amenities the planned human habitats would otherwise deteriorate again into insanitary slums. The National Buildings Organisation can play a vital role as a pace-setter in this regard.

3.7.2. Role of Rural Housing Wings

The National Buildings Organisation of Government of India has during the last 25 years established a number of Rural Housing Wings in the country. One such wing was also established in 1977 at the Regional Engineering College, Srinagar. The work of these wings has given ample impetus to the study and solution of rural housing problems in the various regions of the country.

In Kashmir three clusters of low cost rural houses have been built by the Wing in the village Palpora in Srinagar district, Shopian village in Pulwama district and Harwan village in Baramulla district. The experience of these demonstration houses, now occupied and improved upon by the villagers themselves in respect of small interior details has amply borne out the fact that the rural population is now at a take off stage and ready to absorb ideas and new concepts about well planned human habitats. The greater desire is for demonstrated concepts, about the overall layout and planning of the habitat rather than on low cost construction techniques.

The proper utilisation of housing space, proper ventilation, lighting, the need for environmental planning and development of the habitat, and above all, provision of proper sanitation arrangements for human and livestock use, are important facets of the habitat problem that deserve immediate attention.

The Rural Housing Wings should, therefore, concentrate more on village planning and development than on low-cost housing techniques. These Wings should undertake a country-wide programme of whole village development and put up at least one demonstration village as a model for the respective regions to follow. All the low-cost building techniques perfected so far by the various Wings and the National Building, Organisation could be put to fullest use in rebuilding a village according to proper plans. Finance for such activity should not be a handicap provided the economic-planners and politicians shift their priorities only slightly, and give as much attention to rural and individual welfare as they have given to the national economy as a whole in the last 30 years. This is important, because the growing disparity between the conditions of work and conditions of life has given rise to a number of incongruities in the life of the people, which need immediate rectification.

The Rural Housing Wings should boldly introduce projects for improvement of rural habitats and demonstrate that only through such total change in the rural areas can we ensure steady and enduring economic growth alongwith welfare of the population.

A beginning in this direction is being attempted in Kashmir for village Mujgond situated about 14 kms. from the city of Srinagar. The village has been surveyed and the housing needs have been assessed. A re-development plan has been formulated and the financial assistance for the scheme is being sought from the Government. Similar development plans could be formulated for other villages and once the idea catches on, funds can as well be mobilized by the rural population in the richer districts.

The Rural Housing Wings could publish such re-development plans and bring it to the notice of the concerned villages to evince their interest and obtain comments which will be helpful in project implementation.

3.7.3. Social Factors

The 20th century has produced some remarkable social situations in the developing countries all over the world. Thus we see the modern and medieval in crude juxtaposition in every situation everywhere. It is the bullock cart and the one lac dollar Mercedez car side by side as also the sky-scraper and the thatched hut. Such glaring contrasts are numerous.

Kashmir is no exception. And what is more important, however, is the dichotomy of social value systems. The rich who have gained through the economic boom are quite willing to acquire T.V. sets, automobiles and all the gadegtry of the modern world but there may be no change at all in their other living habits, in particular those which exhibit an insensitivity to the environment around the habitat and/or a total disregared for the suffering of others. People are generally God fearing and, therefore, the rich may donate funds handsomely for a mosque or a temple but it is almost certain that they will not easily donate money for a primary school in their village. That is the Government's job.

These, and many other, sociological factors arise essentially, from the fact that the superficial impact of the technological revolution of the 20th century has not as yet been successful in eradicating the outmoded value system of the feudal era lasting many centuries. This is a major impediment in the task of achieving the improvements in human habitats based on a scientific assessment of human needs and welfare. Here is a major management problem which the technologists have to face. It is not sufficient to merely design and frame a development plan for rural areas but to see it through to execution. This involves idea selling, persuasion, influencing decision makers and creating a congenial socio-technological ethos in the rural sector to ensure success of such plans. The scientists and technologists in the country have, therefore, to take up this vital task of bringing about a revolutionary change in the ideas of the largest sector of population.

The Jammu and Kashmir State Centre of the Institution of Engineers (India) held a seminar on "RURAL DEVELOPMENT IN THE STATE" in 1974. In its recommendations submitted to the Government the need to take up development plans for the villages simultaneously with those of the cities was emphasized in order to avoid lopsided development in the rural sector. Statutory control of building activity in the rural areas is absolutely necessary to prevent further deterioration of the rural habitat. In the prosperous areas unplanned building activity is on the increase. Once many such buildings go up in villages replanning the habitats will be an expensive and formidable task.

3.7.4. Implementation and Management of Programmes

The incorporation of technological improvements into the economic development is the basic need of any rural habitat programme. The process of transfering technological

inputs into the rural sector is to be expedited in order to ensure rapid development and implementation of re-development schemes for villages. There is no dearth of ideas or specific programmes for improvement of rural habitats. However, there is absence of an overwhelming desire for implementation on the part of the planners and engineers.

The Government of Jammu and Kashmir has tried to give an impetus to integrated rural development programmes by laying down an administrative set-up at the district level which co-ordinates the activities of multifarious technical agencies working in the villages, the district administration, and representatives of the people. Such an arrangement is now generally referred to as single-line administration and the development of rural infrastructure is spelled out in the District Development plans which are formulated by the various technical agencies in consultation with the people's representatives at various sittings of the District Development Boards. It is through the efforts of such multi-disciplinary Boards with decision making authority that the rural habitat programme can be expeditiously implemented particularly in those rural areas where the minimum infrastructure in economic terms has already been achieved through efforts in earlier economic development programmes.

There is growing effort to change the present social system in order to involve the rural population at all levels in the development programmes. Although caste barriers are not present in rural Kashmir, the remnants of the feudal order present some impediments. The political leadership has, however, succeeded to a large extent in introducing structural changes in the society and in particular the female population has been sufficiently involved in modernisation processes making rural welfare programmes easier to implement.

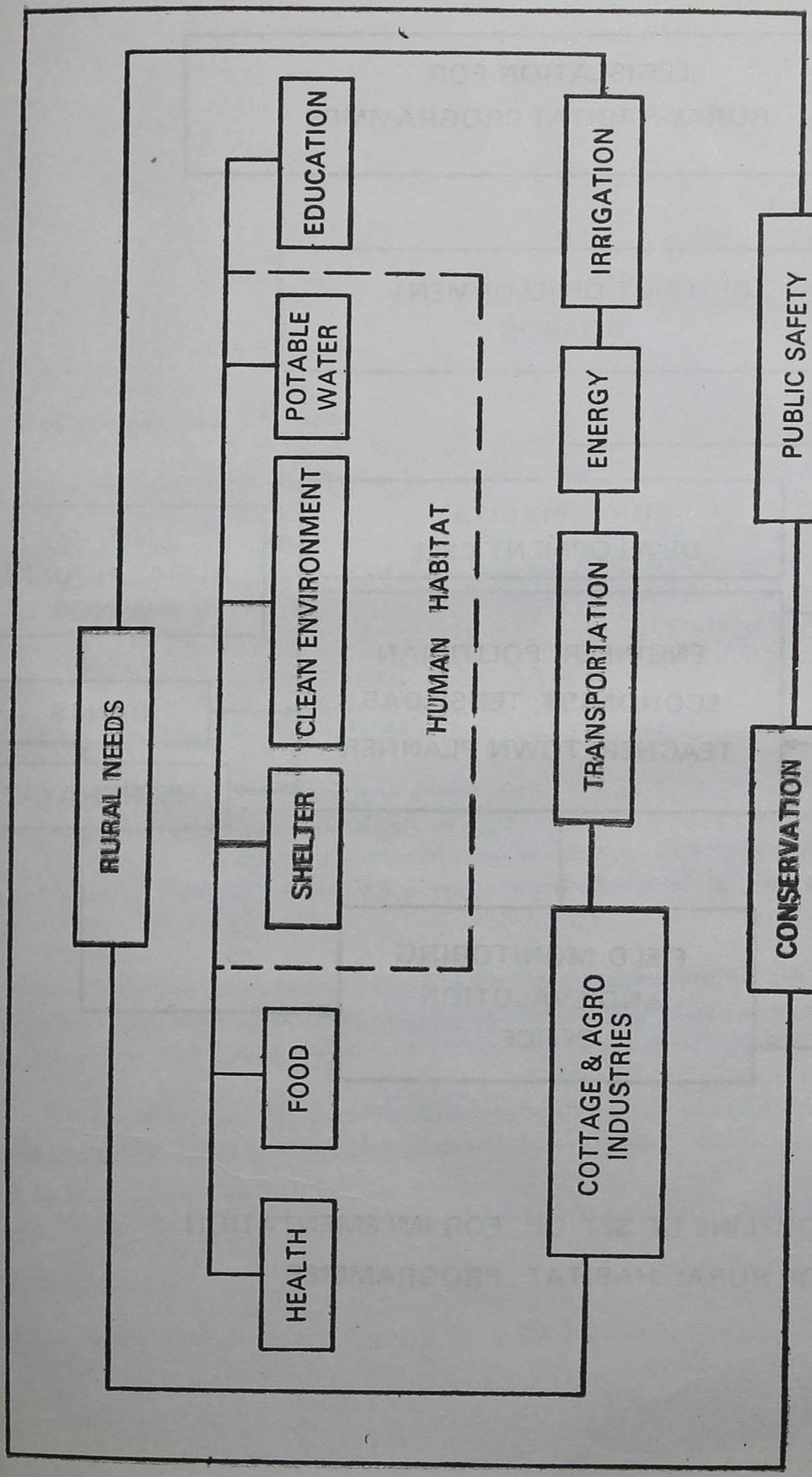
Rural transformation in respect of human habitat is intimately connceted with the motivation of the people for change and their will to implement such programmes. Although external stimuli and assistance are necessary to bring about such changes, it is even more important that people are psychologically involved in the process. This aspect is being increasingly given attention in respect of handicrafts and small scale industries but not much dent has been made in respect of rural housing and environmental planning as yet.

In the broader context of the country the major hurdle between planning and implementation is the feudal concept of status and power ingrained in the political and administrative hierarchy. These must be removed to involve the proper response of the people.

Engineers should bring about a social revolution in the rural areas where they work. It is managerial function to create the needed ethos where people exercise the right kind of option for improving their living. Proper management of rural complexes is the keystone

to sound development of rural habitats and engineers and technologists can best perform this role in collaboration with the people, planners, economists and the political leadership.

New social needs are closely linked to economic growth of a given area, the size of the population, social status of women, the level of education and technical skills, alongwith socio-psychological factors ; and the existance of a technological infrastructure. The proposed set-up for the purpose is shown in Fig. 2.



FIG—1 : INTEGRATED VIEW OF RURAL NEEDS

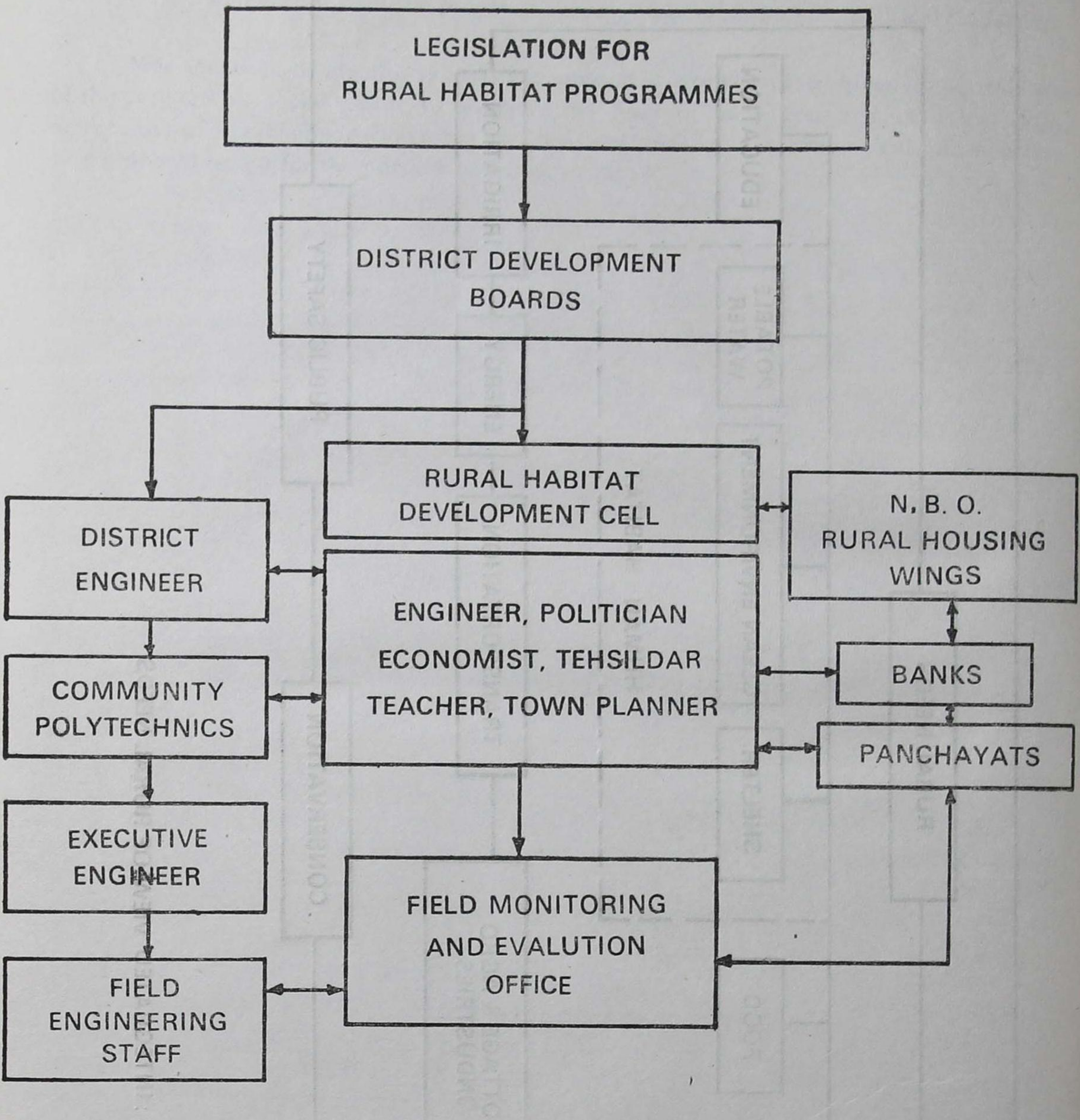


FIG –2 : OUTLINE OF SET-UP FOR IMLEMENTATION
OF RURAL HABITAT PROGRAMMES

4

Planning Strategies

4.1. Constraints on Planning

The lack of money, materials and human will-tc-do constitute the three main constraint in the effective implementation of developmental objectives in respect of minimum acceptable housing and environmental needs of our villages. A sound programme of action for housing must, therefore, be based on a factual knowledge of these constraints in terms of the resources required, and the resources in money, materials and men available for the purpose.

4.1.1. Resource Requirements

A study on *Housing Growth in India* provides certain interesting details regarding housing requirements as also about the materials required to meet these requirements. It is estimated that the country's annual requirements of new houses work out to 7.5 million units. Of these 5.83 million or 77.7 percent houses have to be constructed in the rural areas[1].

The total financial outlay required for the construction of 7.5 million houses in the country has been estimated at Rs. 77,455 millions. The share of rural areas in this outlay works out to be Rs. 56,550 millions or 73 percent of the total outlay.[2]

In physical terms the annual material requirements of rural houses would be 91,000 million bricks, 33.62 million tons of cement, 4.19 million cubic metres of timber, 2.63

1. Bakshi D. Sinha, *Housing Growth in India* (Birla Institute of Scientific Research, New Delhi, 1976) p. 135.
2. *Ibid*, p. 135

million tons of mild steel, 37.51 million cubic metres of lime, 123.46 million cubic metres of surkhi, sand etc. and 105.25 million cubic metres of coarse brick and stone aggregate.[3]

The construction of 5.80 million houses annually in the rural areas of the country is estimated to generate demand for 1328.19 million man-days of labour. Of this the demand for skilled labour is estimated at 333.07 million man-days. Assuming the wage rates of Rs. 7.50 per man-day for the skilled labour and Rs. 5.50 per-man-day for the unskilled labour, the total cost of labour works ont at Rs. 7971.19 millions.[4] These estimates are no doubt very much on the lower side. The prevailing wage rates for both the skilled and unskilled labour at present are much higher than assumed above.

Compared to these requirements the available supplies fall far short of the requirements. For example, the supply of bricks in the country in 1980-81 has been estimated at 25,800 millions, that of cement at Rs. 36.32 million tons and of timber at 11.50 million cubic metres.[5]

A field survey covering the socio-economic and environmental background of our villages is necessary to frame accurate estimates of the resources required to meet the housing needs of our rural people. For Jammu and Kashmir, the area under study, the figures of resource requirements for housing programmes are not available. In view of the special housing problems in hilly regions of the state, it will not be correct to estimate these figures on the basis of all-India figures. The Rural Housing Wing, Regional Engineering College, Srinagar, is planning such a survey in the near future. The 1981 census will also provide useful data in this regard which need careful analysis. Pending such a survey, however, a tentative insight into the cost and material requirements for constructing a house in accordance with the minimum standards for a rural household could be had from the cost and material analysis of demonstration houses constructed by the Rural Housing Wing in certain rural areas of Jammu and Kashmir State. Tables 4.1, 4.2 and 4.3 indicate the costs involved and materials used in the construction of low cost demonstration clusters at villages Palpora, Shopian and Harwan respectively.

The accommodation per living unit in these clusters is as under :

1. Palpora cluster	:	One room	(2.73 × 4.10 m)
		Kitchen	(2.10 × 1.65 m)
		Verandah	(1.82 × 1.50 m)
2. Shopian cluster	:	Two rooms	(2.743 × 2.743 m each)
		Verandah	(1.35 × 1.50 m)
		Bath room	(1.36 × 1.35 m)

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3. *Ibid* p. 136
4. *Ibid* p. 142
5. *Ibid* pp. 137—41

			Two living rooms :
3.	Harwan cluster	:	One in Ground floor (3.35 × 3.96 m)
			One in First floor (3.57 × 4.19 m)
			Cattle Shed (1.52 × 2.13 m)

TABLE 4.1

Cost Composition and Other Details of Palpora Cluster

Project at a Glance

1.	Name of the village	...	Palpora
2.	Total cost of the project	...	Rs. 63,000
3.	Total cost of 20 houses	...	Rs. 57,000
4.	Cost per unit	...	Rs. 2,850
5.	Total cost of 20 No. latrines	...	Rs. 8,000
6.	Cost of one unit latrine	...	Rs. 400
7.	Total plot area of the project	...	2,557·50 Sq. Mtrs.
8.	Total built up area	...	468.72 Sq. Mtrs.
9.	Plinth area per twin set	...	46.87 Sq. Mtrs.
10.	Plinth area per unit	...	23.43 Sq. Mtrs.
11.	Accommodation provided per unit		One room 2.73×4.10 m One kitchen 1.82×2.50 m One verandah 2.10×1.65 m

Cost Composition of the Cluster

S.No.	*Name of item*	*Cost of materials* Rs.	*Labour charges* Rs.
1.	Earth work in excavation complete (item 1 to 5)	...	413.40
2.	Stone concrete in lime with 40 mm Nallah stone 1 : 3	1,014.00	372.19
3.	Brick masonry in mud with 2nd. class bricks etc.	14,791.25	5,070.00
4.	25 mm thick cement concrete for floor excluding cost of cement	687.28	338.00

5.	Sundried brick masonry in mud	5,556.47	1,720.00
6.	1st. class Budloo wood work	1,782.02	338.00
7.	25 mm country made battened door shutters	1,194.83	169.00
8.	Ist. class Budloo wood work unplained	7,374.94	338.00
9.	Kail wood full glazed shutters	1,101.60	169.00
10.	Labour for fitting of Asphaltic sheets for roof	...	2,193.48
11.	Labour for fitting of Asphaltic sheets for Ridge Gola	...	121.78
12.	Brick concrete in lime	321.37	129.30
13.	20 mm mud plaster with *kesri*	1,323.23	507.30
14.	White washing two coats and finish	35.00	16.00
15.	12.5 mm mud plaster with *kesri*	20.30	8.00
16.	12.5 mm cement plaster excluding cost of cement	600.44	175.00
17.	Battle ship grey painting	215.00	...
18.	Extra charges for brick masonry in mud	...	755.78
19.	Dressing and levelling of ground	...	700.00
	Total :	36,017.73	13,534.23
20.	Add cost of Asphaltic sheets	5,600.00	...
21.	Add cost of cement	1,575.00	...
22.	Add cost of plain Asphaltic sheets	237.00	...
	Total :	43,429.73	...
23.	Add cost of lavatory blocks	8,000.00	...
	Total :	51,429.73	13,534.23
	G. Total :	Rs. 64,963.96	

TABLE 4.2.

Cost Composition and other Details of Shopian Cluster

Project cost at a glance :

(*a*) Name of the village	...	Shopian
(*b*) Total cost of project	...	Rs. 74,994.70
(*c*) Total cost of 20 units	...	Rs. 74,994.70
(*d*) Cost per unit	...	Rs. 3,750.00
(*e*) Total plot area of the project	...	125.42 sq. mtrs.
(*f*) Total built-up area	...	116.25 ,, ,,
(*g*) Plinth area per unit	...	23.25 ,, ,,
(*h*) Plinth area cost of unit	...	Rs. 161/- per sq. mtr.
(*i*) Accommodation per unit		2 rooms (2.743×2.743 m) Verandah (1.35×1.50 m) Bath room (1.35×1.35 m)

Cost Composition of one Set (4 units) of Demonstration Houses.

S.No.	*Particulars*	*Quantity*	*Rate Rs.*	*Amount Rs.*
1.	Boulder stones	28 m^3	35.75 m^3	1,000.00
2.	Pacca bricks	1,267 Nos	480/-%0	608.00
3.	Sundried bricks	14,334 Nos	120/-%0	1,720.00
4.	Budloo wood	5.23 m^3	608/-m^3	3,179.00
5.	Masons	60 Nos	22/- each	1,320.00
6.	Carpenters	31 Nos	20/- each	620.00
7.	Mazdoors	92 Nos	10/- each	920.00
8.	C.G.I. Sheets	433 kgs.	516/- quintal	2234.00
9.	Earth	56 m^3	17.40 m^3	974.00
10,	Busa (*praji*)	4 Monds	32/- per mond	128.00
11.	Wooden shutters	11.40 m^2	86.35 m^2	988.00
12.	Eaves boarding	48.60 R.m	3.30 R.m	160.00
13.	Door shutters	15.25 m^2	32.35 m^2	493.00
14.	Painting of sorts	93 m^2	2.85 m^2	265.00
15.	Nails	13 kgs	4/- per kg.	52.00
13.	Washers	2.5 kgs	4/- per kg.	10.00
27.	Cement	10 Bags	32.90 per bag.	329.00
				15,000.00

TABLE 4.3

Details of Low Cost Demonstration Cluster (Harwan) Sopore.
(Costs as of 1981 price level)

Cost composition of one set of 4 units-2 storey with cow shed.

S.No.	*Particulars*	*Quantity*	*Rate*	*Amount*
1.	Quarry Stone	30 C.M.	72.33 C.M.	2170/-
2.	Sun-dried bricks	30,000 No.	116/-%0	3480/-
3.	Budloo wood supply	10.50 C.M.	112-15 C.M.	11776/-
4.	C.G.I. Sheet	5 Quintals	1075	5375/-
5.	Masons	110	25.50	2805/-
6.	Carpenetrs	85 Nos.	25/-	2125/-
7.	Eves boarding	57 R.M.	10.70 R.M.	610/-
8.	Door shutters	13.55 S.M.	6.31 S.M.	85.50/-
9.	Window shutters	7 S.M.	63/- S.M.	441/-
10.	Painting of sorts	52 S.M.	2·8 S.M.	145.60/-
11.	Nails etc.	8 kg.	8/-	64/-
12.	Washer	5 kg.	8/-	40/-
			Total : Rs.	29,117/10
			Plinth area cost of unit.	Rs. 363/-/m^2

Unskilled labour charges are included in item no. 5 and 6.

These clusters of demonstration houses constructed by the Wing so far are located in the Valley of Kashmir. The minimum housing needs of rural dwellers in the valley of Kashmir have been worked out in the preceding chapter. A two storey house with at least two living rooms, a bath room, a cattle-shed and a "kothar" comprise the basic housing needs in the rural areas of the valley.

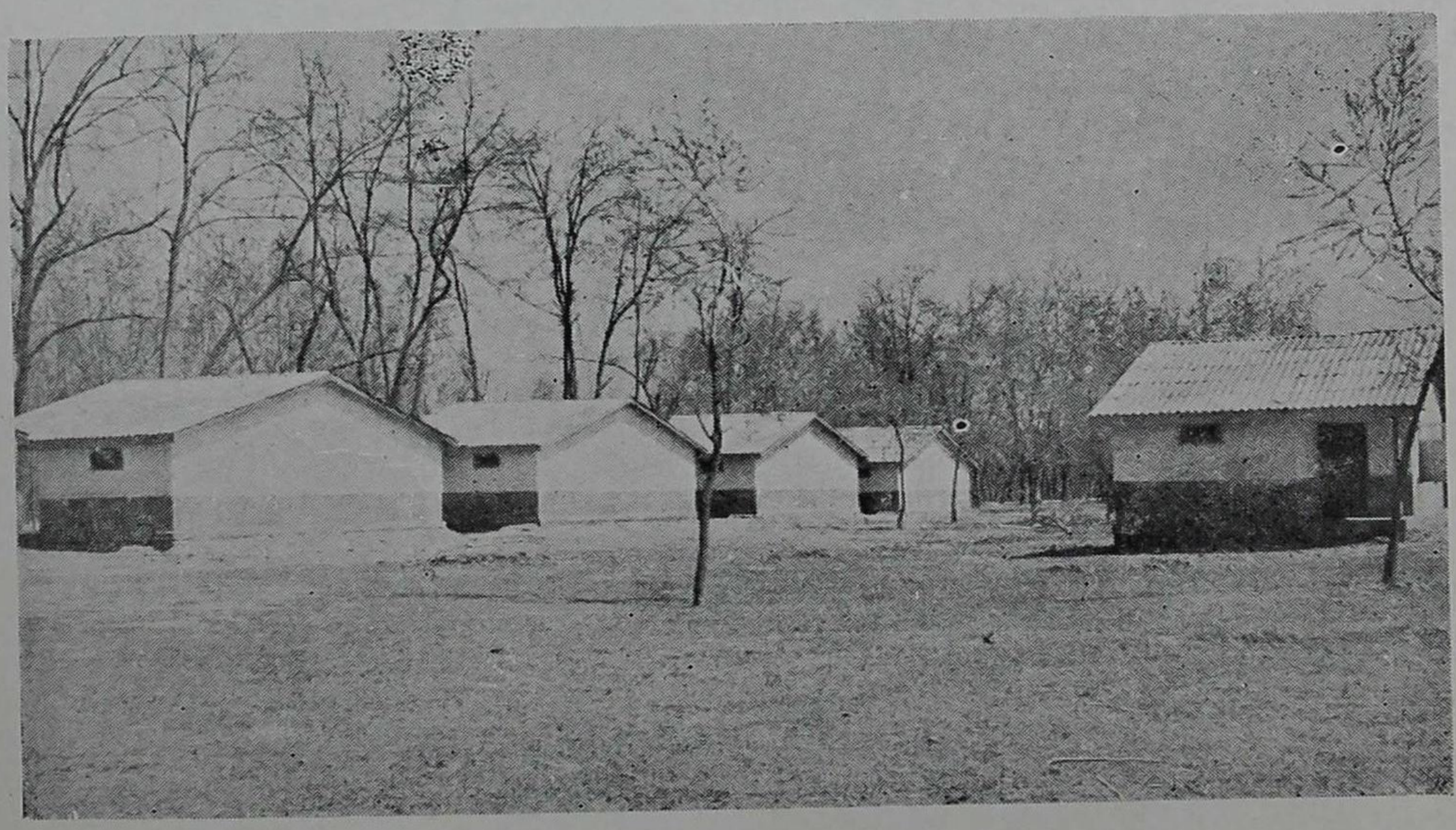
Calculations regarding the material and financial requirements for solving the problem of rural housing in the valley can, therefore, be made on the basis of houses which, to some extent, meet the basic needs of rural population. Of the three clusters of demonstration houses referred to above only two can be said to meet to some extent the basic housing needs of rural population. Palpora cluster, being the first of its kind was mainly experimental in nature. The other two clusters were constructed after assessing the basic housing requirements of the beneficiaries. Since estimates regarding the number of houses to be constructed for solving the problem of rural housing in the valley are not readily available, no attempt

Housing the Houseless

Palpora Kashmir

↑ Twin Set

Cluster of Twin Sets ↓



Housing the Houseless

Shopian Kashmir

↑ The Cluster

Housing the Houseless

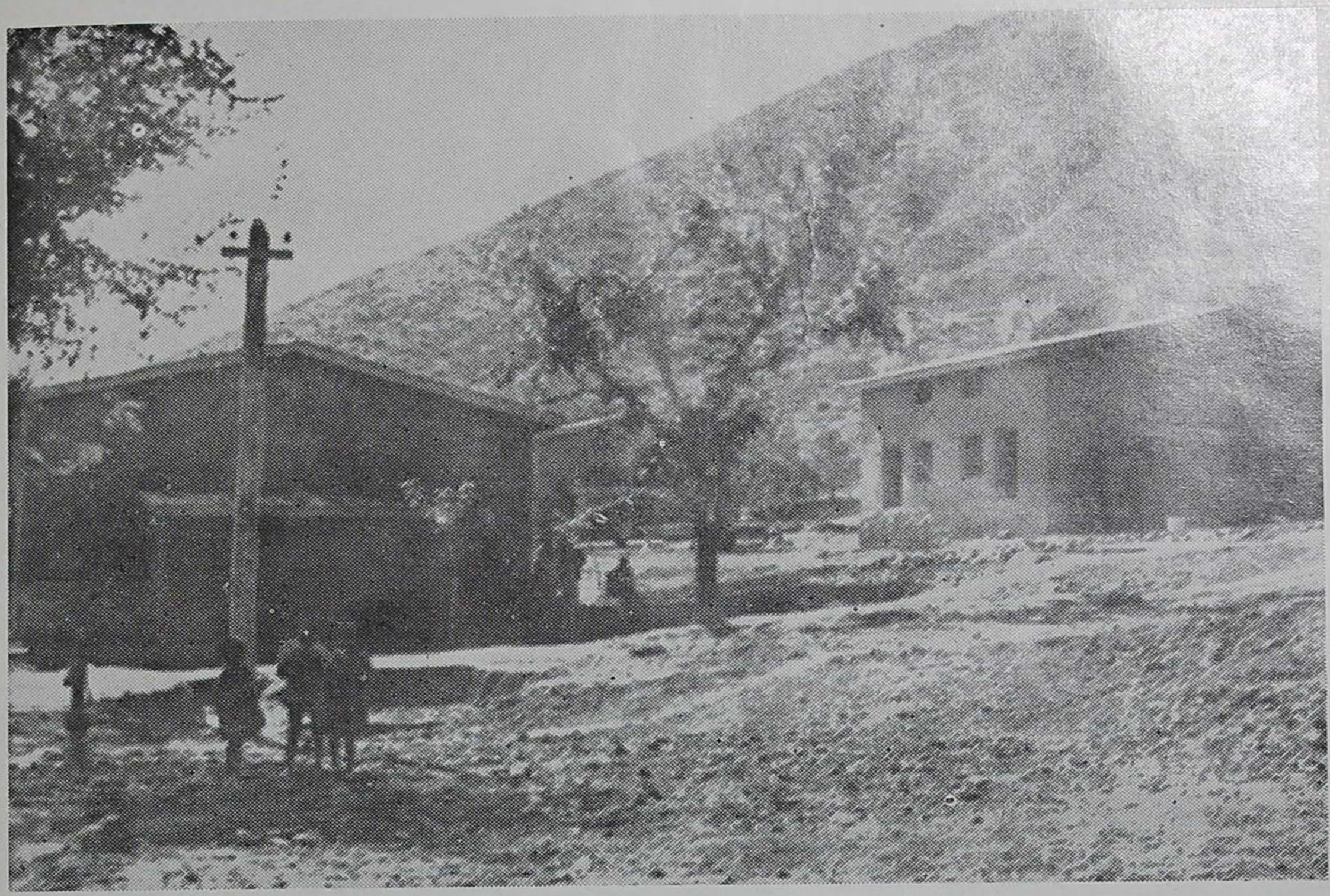
Harwan Sopore Kashmir

↓ Inauguration By Union Minister (Works & Housing) ↑

Housing the Houseless

Harwan Sopore Kashmir

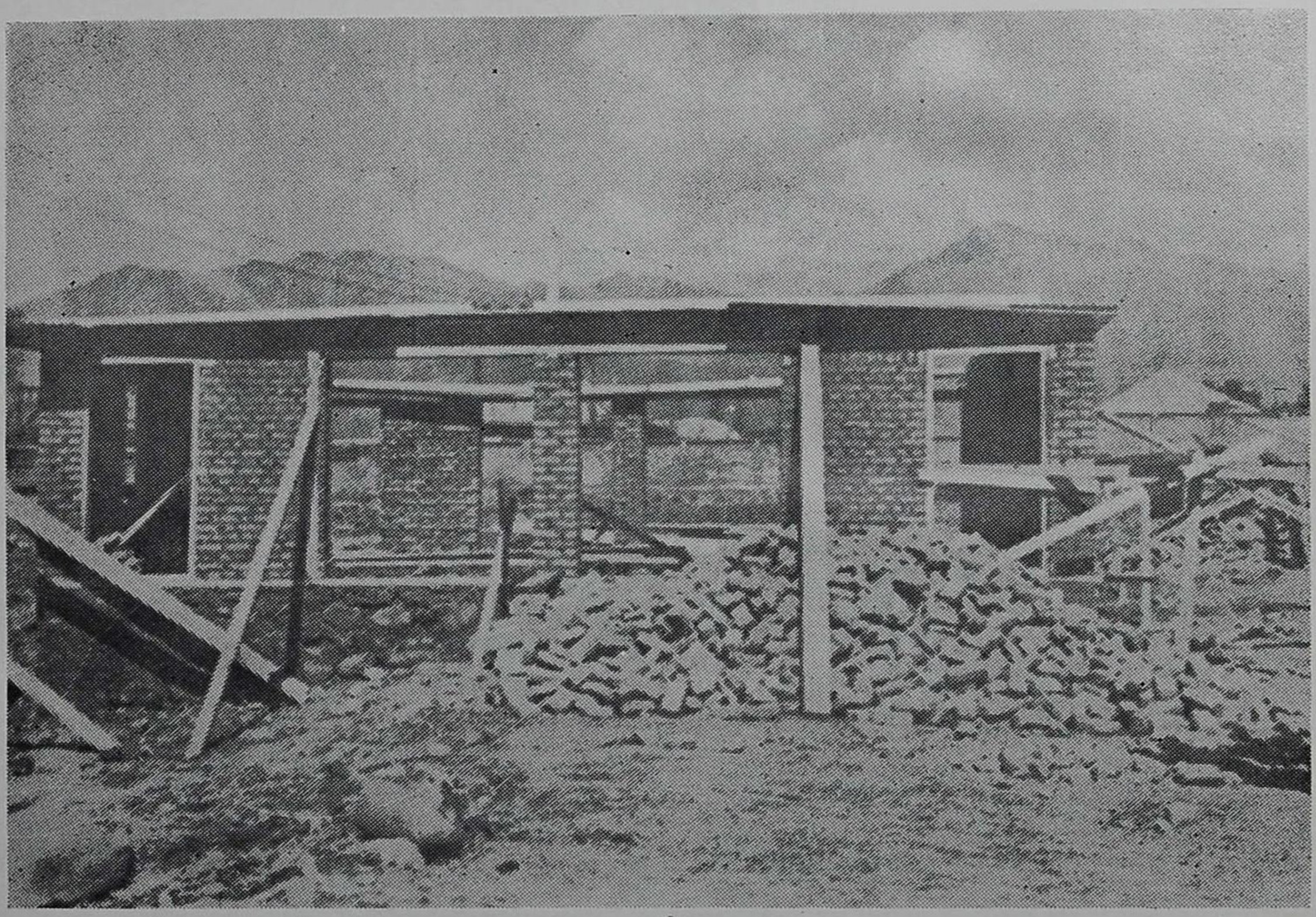
↓ The Cluster



Union Minister (Housing) with Director N.B.O. inside a Demonstration House

Housing the Houseless

Aishmuquam Kashmir



↑ Housing Unit under Construction

is made to assess the material and financial requirements for solving the problem of rural housing. This job is expected to be undertaken in the second volume of the monograph.

The construction of Shopian cluster was completed in 1979. The cost per set of 4 living units in this cluster works out to Rs. 15,000. Thus a living unit for a household costs Rs. 3,750. The cluster was constructed by making an intensive use of the locally available materials like wood, boulder stones, kacha bricks, etc. The houses have been provided with roofs made of G.I. Sheets to protect residents against heavy odds of snowfalls and rain.

The construction of Harwan cluster was undertaken and completed in 1980. The beneficiaries of this cluster had been identified before the start of construction. The wing decided to construct double-storey houses here to suit the changing weather conditions and meet customary standards. Besides, the decision regarding the accommodation to be provided was taken after assessing the needs of the beneficiaries. The cost of a set comprising four living units works out to Rs. 29,000. Thus the cost of per living unit (double storey) amounts to Rs. 7,250. Since the houses in Harwan cluster meet the basic housing needs in the valley of Kashmir, estimates regarding the materials and financial resource-requirements for solving the problem of rural housing have to be based on the defects of this cluster. The construction of a set (of 4 units) in this cluster required 330.70 m^3 of quarry stones, 30,000 sun-dried bricks, 112 m^3 of budloo wood, 5 quintals of G.I. sheets etc. The direct skilled labour component of a set comprised of 110 mason man-days and 85 carpenter man-days. Construction of another housing cluster at village Aishmuquam has been undertaken by the wing and the work is in progress.

4.1.2. Resources availability

The resources available to the poor villager for meeting his minimum housing requirements can be determined by the paying capacity of the householder for housing, which in turn will depend upon his income, and also on the availability of construction materials.

4.1.3. Paying capacity of a villager for housing

The State of Jammu and Kashmir comprises one of the backward regions of the country. The per capita income at current prices in the state in 1974-1975 stood at Rs. 835.95 compared to Rs. 1022.40 for the country as a whole[6]. No separate data is available regarding the per capita income in rural and urban areas. The per capita income in the rural areas, however, is expected to be lower than the State average of Rs. 835.95.

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6. *Digest of Statistics 1975-76* (Directorate of Evaluation and Statistics, Govt. of Jammu and Kashmir) p. 291 and p. 307,

The white paper on National Accounts Statistics, 1970-71 to 1978-79, released by the Central Statistical Organisation (CSO), estimates the share of rural areas (all-India) in net domestic product for 1970-71 to be 62.8 percent.[7] Assuming the same ratio for the State of Jammu and Kashmir, the per capita income in the rural areas would work out to about Rs. 570. However, this estimate of rural per capita income in the State is just a rough approximation.

The average or per capita income figures alone, however, do not indicate the exact measure of economic prosperity of people because per capita income estimates conceal an important element that of income inequalities. In the absence of any definite information about the pattern of income distribution amongst rural people the ownership of land, which is a primary source of income for most of the villagers, could be taken as a rough index of the existing income inequalities.

Table 4.4 provides some details regarding the land ownership pattern in the State. It can be seen from this table that the total number of holdings in the State in 1972 stood at 9,78,666. Of these the size of 31.03 percent or 3,03,729 holdings was below 0.253 hectares. In other words a little less than one third of the total land-holdings in the State were equal or smaller than one-fourth of an hectare. Another 18.34 percent of the holdings measured between 0.253 and 0.506 hectares of land. Holdings of 4.856 hectares and above accounted for just 1.21 percent of the total holdings. Holdings of about one hectare or below accounted for 72.81% of the total holdings. The proportion of households operating half an hectare or less of land works out to be about half of the total rural land holdings.

The above pattern of land ownership in the State of Jammu and Kashmir reveals that over 70 percent of the rural households own a hectare or less of land.

Cultivation of land is the main occupation of most of our rural dwellers. Their income from land depends to a large extent on the size of their holdings. Given small size of holdings for the majority of the cultivators their income from land is quite inadequate for their requirements. However, most of the land under cultivation in the valley is assured of irrigational facilities and naturally the average yield per hectare is higher than the all-India average. For example, the yield per hectare of rice in India in 1973-74 stood at 11.51 quintals compared to 22.13 quintals for the valley of Kashmir[8]. Thus the yield rate for rice for the valley is about double that of all-India average.

The yield of rice, the principal crop in the valley, has been increasing from year to year. At present the average yield of rice per hectare is about 30 quintals. The

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7, "National Income : Rural-Urban Contrasts', in *Economic and Political Weekly* (Bombay), No. 22, Vol. XVI, May 30, 1981, p. 968.

8, *Digest of Statistics 1975-76 Op. cit.* p. 46 and p. 305.

current average income from a hectare of irrigated land under rice would work out to be approximately Rs. 6000. Cultivators with holding size of 0.25 hectares or less and accounting for a little less than one-third of the total holdings in the valley, can be expected to earn less than Rs. 1500 from their land. In the case of cultivators with holding size of about half a hectare, the income from land can be expected to be about Rs. 3,000.

Similar estimates can be made for other sections of the cultivators on the basis of the size of their holdings as shown in Table 4·4. The estimates of total income for different categories of cultivators are not readily available. Land in the valley being mostly irrigated is quite productive and suitable for the production of rice, fruit and certain other high value commercial crops like saffron (Kesar) etc. The estimates of total income can, therefore, be arrived at only after a detailed field investigation. However, it would suffice here to state that the average income of rural households in the valley is likely to be in excess of the all-India average. But in spite of this fact, a large majority of rural households are very poor and find it difficult to meet their basic needs of existence. This becomes evident when one comes into direct contact with the rural people in most parts of the valley.

Given the above facts, it should be quite clear that most of our rural households cannot afford to spend large sums of money on their housing. The capacity to pay for housing is very much related to the income of rural or urban households. Table 4·5 shows the relationship between consumption expenditure of rural households and their capacity to pay for housing annually as well over a 20 year period. The table shows that the bottom 5 percent of rural population in the country spend Rs. 34.98 on their dwellings which accounts for 5 percent of their total annual consumption. Such households can spare Rs. 699.60 for housing over a period of 20 years.

Another 5 percent of rural population, whose annual consumption expenditure works out to be Rs. 953.70, spend Rs. 57.22 or 6 percent of their total consumption expenditure on housing. Their capacity to pay for housing over 20 years works out to be just Rs. 1144.40. Nearly 50 percent of the rural households in the country cannot afford to make a provision of Rs. 4000/-or more over a 20 year period for the improvement of their housing.

The position in respect of rural households in Jammu and Kashmir State cannot be much different. Judging from these figures it is evident that an average rural dweller will not be able to meet on his own the cost requirements of about Rs. 4,000/-or so for making a house with minimum standards even over a period of 20 years.

4.1.4. Availability of Construction Materials

In addition to the poor paying capacity of an average villager the other factor which further depletes his capacity to build his own house, is the acute shortage of important

construction materials. In respect of Jammu and Kashmir region, it is common knowledge that not to mention the scarcity of expensive materials like cement and steel, even timber which was once considered to be the cheapest locally available construction material and for this reason was traditionally used widely for building work, has become scarce and very costly.

From the above analysis it should be clear that for improving the housing conditions of our villages the State will have to step in a big way by organising and launching housing projects on a massive scale to provide the minimum needs of shelter to lakhs of rural poor households. A strategy will have, therefore, to be evolved for successful accomplishment of this task and to attain the minimum planning targets in respect of village housing and environment with the limited resources and state help.

4·2. Planning Strategies

4·2·1. General

It has been brought out earlier that even to attain the minimum planned targets in respect of village housing, no strategies, whatsoever, will work without the active involvement and help of the state. Considering the enormity of the problem, on the one hand and limited resources on the other, an approach of phased planning spread over a number of years will have to be followed for implementing the programmes of village housing and environment Obviously in this phased programme of housing the poorest houseless and landless villagers must receive the first priority attention.

Further the planners will have to find ways and means for raising the necessary financial inputs, both from individual contributions and from loans and financial assistance from the state and also for the best mobilisation and utilization of other physical and material resources required for the execution of the rural housing and improvement plans. What ought to be done in this regard is outlined in what follows :—

To sum up, the strategies that will have to be followed to overcome various constraints in achieving objectives for rural housing, will involve following actions :—

(*i*) A phased programme of housing work will have to be followed for which poorest section in need of shelter will have to be identified for first priority attention.

(*ii*) The finances to be raised in the form of loans and assistance from the state and other housing agencies and the individuals contributions will have to be determined.

(*iii*) Methods for the best and maximum utilisation of the available materials and other physical resources required for the implementation of housing plans at a reduced cost will have to be developed.

4.2.2. Identification of poorest sections for priority

The overall condition of rural housing in general in Jammu and Kashmir is far from satisfactory. There is shortage of living accommodation. The quality of existing houses is not conducive to healthy development and there exists considerable scope for the improvement of village environment. However, the nature and magnitude of the problem is not uniform in the case of all sections of the population. There are households with reasonable living accommodation and households without proper or bare minimum accommodation. The latter cotegory in the main includes 39.3 percent of households in the state who in 1971 were occupying just one living room. The proportion of such households varies from place to-place. This proportion in 1971 was the highest for Rajouri district and the lowest for Srinagar district. A minimum of two living rooms per household comprises bare minimum housing needs. Naturally, households without any living accommodation or with just one room deserve first preference in any programme of rural housing planning, The first phase of rural housing schemes for the State of Jammu and Kashmir must aim at solving the housing problem of such households. Resources, both physical and financial set aside for housing schemes in the State must be alloted to the districts on the basis of their proportion of households occupying single rooms.

When all the rural households have been provided with bare minimum (two rooms) living accommodation of reasonable quality, attention can be focussed on such sections of population who on their own have managed two or more living rooms. The main problem of such households is to improve the quality of their houses and the surrounding environment. Once those with no or single room accommodation have been helped to construct, at least, two room houses of reasonable quality, the other better off households are most likely to affect similar quality improvements in their houses on their own. They can be provided with all sorts of facilities and guidance in this direction.

Looking at the plan provisions for housing in the State, it appears that the State Government has not accorded the priority the problem deserves. The expenditure on housing (including urban housing) during the first three Five Year Plans stood at Rs. 15.96 lakhs, Rs. 99.24 lakhs and Rs. 111.89 lakhs respectively. During the period 1966-69, the plan expenditure on housing in the State was just Rs. 80.98 lakhs. During the Eourth plan, the State Government's expenditure on housing amounted to Rs. 358.25 lakhs. The corresponding proposed outlay for the Fifth Plan was Rs. 300 lakhs.

TABLE 4·4

No. of Holdings and Area By Size Class (1972)

S. No.	*Size class*	*Hect.*	*No. of holdings*	*Percentage*	*Percentage cumulative*	*Area Hect.*	*Percentage*
1.	Belew 0·253	,,	303,729	31·03	31·03	51667	5·64— 5·64*
2.	0·253— 0·506	,,	179,495	18·34	49.37	69732	7·61— 13·25
3.	0·506— 0·809	,,	141,462	14·45	63·82	93458	10·20— 23·45
4.	0·809— 1·012	,,	87,992	8·99	72·81	79461	8·67— 32·12
5.	1·012— 2·023	,,	154,496	5·79	88·60	225577	24·61— 56·73
6.	2·023— 2·833	,,	59,977	6·13	94·73	148043	16·15— 72·88
7.	2·833— 4·047	,,	26,194	2·67	97·40	91666	10·00— 82·88
8.	4.047— 4·856	,,	135, 84	1·39	98·79	61168	6·67— 79·55
9.	4·856—10·117	,,	10,564	1·08	99 87	73191	7·99— 97·54
10.	10·117—20·234	,,	10,050	0·11	99·98	13735	1·50— 99·04
11.	20·234—30·351	,,	67	0·01	99·99	1550	0·17— 99·21
12.	30·351—40·469	,,	19	...	...	669	0·07— 99·28
13.	40·469—505·86	,,	9	...	...	397	0·05— 99·33
14.	50·586—and above	,,	28	0·01	100·00	6138	0·67 100·00
		Tnlal :	2·78666	...	...	916452	...

*Percentage cumulative total

Source : *Digest of Statistics 1975-76* (Directorate of Evaluation and Statistics, Government of Jammu and Kashmir), P 62.

TABLE 4.5

Per Capita Consumption and Capacity to Pay for Housing Situation

Section of population	*Consumption*		*Capacity for housing expenditure/per family.*	*Expenditure on dwelling per annum*	*Capacity to pay for housing over 20 years per family unit*
	Per capta (Rs.)	*Per household (Rs.)*			
0— 5	127·2	699·60	5%	34-98	699·60
5— 10	173·4	953·70	6%	57·22	1144·40
10— 20	215·0	1182·50	7%	82·77	1655·40
20— 30	260·8	1434·40	8%	114·75	2295·00
30— 40	304·3	1673·65	9%	150·62	3012·57
40— 50	349·0	1919·50	10%	191·95	3839·00
50— 60	401·5	2205·50	10%	220·55	4411·00
60— 70	458·7	2522·85	11%	277·51	5550·27
70— 80	537·7	2957·35	11%	325·30	6506·17
80— 90	678·6	3732·30	12%	447·87	8957·52
90— 95	875·1	4813·05	15%	731·50	14439·15
95—100	1544·6	8495·30	18%	1529·15	30583·08
		to	to	to	to
		40,000	25%	10,000	2,00,000
All Sections	456·6	2511·33	11%	276·25	5525·00

In general the State plans have not attached any serious importance to the problem of housing. Rural housing has been almost completely neglected. Most of the plan expenditure on housing has been for the purpose of urban housing only. Even here the priority attached to housing has not been in line with the actual requirements. It is hoped that the government would during the sixth plan and thereafter take keen interest in improving the condition of housing in general and that of rural housing in particular.

While the government and other housing agencies should allocate larger and larger amounts for the development of rural housing in the State, the research agencies connected with such housing should explore the possibilities of constructing cheaper houses by economi-

ing the use of scarce building materials. These research organisations should also evolve improved designs of rural houses that can be constructed by making an intensive use of locally available materials. The ways and means of reducing the costs of construction have already been evolved to some extent. What ought to be done in this regard is outlined in the section which follows.

4·2·3. Low Cost Building Technology

Building construction today must be thought of as an industry. This fundamental change in thinking is necessary in order to apply to this industry the same norms as are appropriately applied to all industries involved in manufacture of mass produced consumer goods.

Housing of a large segment of population in proper environments is a crying social need in a developing country. The number of good houses to be built is stupendous considering the size of population. Housing is, therefore, to be taken up on a mass scale.

The need for keeping cost of buildings low has been voiced in many forums and lot of work has been done to improvise building construction in order to reduce costs. However, such developments have not become common place because of the absence of a long-term policy in regard to the development of the Building Industry as a whole. This matter, therefore, needs attention on a priority basis.

While considering the question of low cost buildings, three sectors of building industry must be clearly identified. These can be classed as follows :

(*i*) Public Institutional Buildings

(*ii*) Public sector housing projects for large segments of population

(*iii*) Private houses in the rural and urban environments.

Depending on the classes of buildings as defined above there will be different norms and specifications that shall be applicable in each case. However, within the framework of those specified norms there shall have to be a constant endeavour to economise the costs of construction. Economy of costs can be possible by some of the following measures :—

Economic design of buildings consistant with safety against natural forces and simple attention to aesthetic beauty. This shall be ensured through a close understanding between the engineer and the architect in respect of the essential purpose and utility of the building. Even in large sized public institutional buildings a lot of saving of cost is possible through simple architecture devoted essentially to highlight the asthetic quality of the utilitarian

features themselves, For public sector housing and other projects costs can be reduced through standardization of designs.

Reduction of cost of materials through increased production of bricks, cement, lime, sand, ballast, timber, window and door frames and roofing materials on a mass scale.

Reduction in labour costs through standardization of design of buildings and mass construction programmes. Labour productivity has to be increased consistent with quality of work done. This aspect is related to the wage structure of skilled labour on the one hand, and on the availability of trained skilled man-power on the other. The greatest need of the hour to improve this situation is to initiate large scale programmes for training of skilled artisans in the following trades :

(*a*) Masons
(*b*) Carpenters
(*c*) Glaziers
(*d*) Plumbers
(*e*) Painters and decorators
(*f*) Electricians, and
(*g*) Construction machine operators.

There is an acute shortage of trained manpower in these trades which inhibits the development of mass production techniques in the building industry.

Mass production techniques are particularly applicable to private homes and homes built by the public sector. Once the need is estimated over a period of time and designs have been standardized, it shall be possible to arrange the manufacture of standard items of use in buildings at a lower cost. Doors and windows, and roofing materials can be made to order from a factory. Similarly concrete panel walls made from light weight concrete can be mass produced in a factory and economically transported and installed at the site of construction. Increased use of overhead cranes for the con truction of tall buildings will enable to have greater speed of construction and easy handling of mass produced materials for installation within the buildings.

A massive programme of rural buildings must be financed by the government simultaneously with the creation of building materials manufacturing industry. Even the private sector of industry could be mobilized for the purpose with appropriate incentives.

Housing Construction Corporations need to be encouraged in the private sector so that with appropriate financial outlays they can undertake to butild homes for the people the cost whereof would be repayable as a small first sum plus twenty to thirty annual

instalments paid by the owner to own the house. Such incentive programmes will encourage building industry to expand and generate the needed resources in materials and manpower that are essential for keeping the building construction industry viable. Mere tinkering with the problems shall not achieve the desired objectives.

Specifications of buildings for the three types of uses mentioned earlier can be varied considerably depending on the use and expected life span of the building. Low cost houses in the rural sector are being built in Jammu and Kashmir State with the simplest possible naturally available materials like mud, bricks, low grade timber, lime, stone, ballast and surkhi, etc. Construction with these materials must be encouraged. However, what is urgently needed is that the people be helped to undertake redevelopment of their rural habitats in a planned manner and the designs of rural houses be prepared on a mass scale in the light of living and work habits of the rural population.

Lot of construction activity in the rural areas is privately taking place right now and all such construction proceeds haphazardly without thought, care, or planning according to the whims of the owner as well as the chief artisan of the village who happens to be only technical guide of the owner. The results are there for all to see. An unnecessary and huge chunk of masonary sunk into the foundations and the high plinth ; an ugly house with lot of wasted space which could have been well designed and built at a lower cost if technical guidance was available easily, and there were some statutory regulations to control the building design.

The need for comprehensive *legislation to regulate the redevelopment and model planning of village housing* is imminent and must be taken up in earnest by the people's representatives so that buildings will come up in the rural areas at low cost and result in a happy and healthy rural habitat.

The National Buildings Organisation of the Govt. of India and many of its Rural Housing Wings have produced small scale designs of low cost and low specification dwelling units for the various regions of the country. The experimental/demonstration houses are meant to guide the local people in choosing their specifications and evolve better planned designs of rural houses . The success of such programmes will depend on Governmental action which must activise such programmes in the light of what has been mentioned above.

The low cost designs of houses built at Palpora, Shopian and Harwan in the Kashmir valley under this scheme have been described elsewhere. The performance of these homes is being monitored and user reactions obtained in order to incorporate the users needs for the evolution of better designs in the future. The guidelines for Governmental action as spelt by the National Buildings Organisation and given in Table 5.5 need to be followed-up by all agencies involved in housing industry.

Foundation design of all types of buildings must be based on sound data and related facts. Lot of money can be sunk into foundations which are over designed. There is room for evolving appropriate low cost foundation designs for private houses as well as institutional buildings. Foundations properly designed by experts in Geotechnical Engineering will ultimately provide large saving in total construction cost. Haphazard use of piles, costly cement and mild steel in foundations raises the costs of construction enormously for simple buildings. Even private users pay through their nose for high cost of foundations not needed at all. The situation is even worse in the rural areas where lot of money is sunk for raising the houses above the water level of future floods. Proper sites could avoid such cost.

School Buildings form large volume of buildings in the public sector, for primary, middle, and high schools in various areas. Depending upon the number of students and teachers for each type of such schools, standard low specification and low cost designs for such buildings can be worked out and appropriately built to save the exchequer scarce capital needed for other activities. Such schools can be built to last 25-30 years, at the most, and thereby use of costly materials could be totally avoided.

The Central Building Research Institute, Roorkee has also evolved a number of low cost, mass produced designs for public and private buildings in the sub-tropical Indo-Gangetic plain of the country. Use of these procedures in Jammu and Kashmir State where appropriate conditions prevail could be encouraged in the above context.

4·3. Guidelines for Governmental Action spelt out by National Buildings Organisation

1. Non-Formal Education.
2. Improved housing evolving appropriate planning, design and technology with low-cost bias.
3. Adoption and initiation of incremental housing suiting household capacity and growing need.
4. Training of the masses through non-formal education ensuring self-help and greater involvement in housing.
5. Ensuring healthy invironmental attitude and desire for improved sanitation, drainage, drinking water, roads, etc. with sustained urge and efforts of the rural masses.
6. Low cost High rise buildings.
7. **Dwellings**—Covering land use aspects such as residential density and requirement of open spaces, built-up space needs and quality of indoor environments ; structural and constructional requirements, etc.

8. Essential Services : including potable water supply, sanitary laterines, drainage, etc.
9. Community Facilities : Catering for educational buildings, health buildings, community space, etc.
10. Public Utilities : Providing for transport and communication facilities, power supply, disposal of wastes etc.
11. Training of personnel employed in rural housing or rural reconstructional activities.
12. Arousing interest in innovated low-cost techniques as developed through research and their employment in housing programmes.
13. Assisting the concerned Departments or Organisation in technical matters, as and when sought.
14. Procuring data through such collaboration from the States of the Region for documentation sought.
15. Urging the State Departments, and building agencies to utilise the services of the wing more effectively.

5

Future Prospects-A Ray of Hope

5.1. Introduction

The cover of this Monograph shows the rural poor of village Harwan not far from Srinagar, the capital of Jammu and Kashmir. They lived at the fag end of this twentieth century in simple grass igloos, their profession, being the oldest in the world, namely weaving of household items from stiff grass and wicker and willow etc. Survival is dependent on the rural agricultural community around. These nice looking cheerful people are, however, looked down upon by the agriculturist. They are called the 'social castes' of the valley, a new term coined to define briefly their poverty and social deprivation.

Only a year or so ago, no one would have the faintest of dreams that these wandering people could live in new huts. Earlier their thatch caves were the only shelter around here. Now the whole place is a pleasant habitat. There is pure water, where there was none to drink. There is a school for the kids. The whole place smiles and the change meant small financial inputs, dedicated work and appropriate technology.

This picture is typical of the country. Dimensions of the problems are different ; so are their local colours. But the essence is the same.

The rural housing programme of the National Buildings Organisation is addressed to the task of changing this scene through the building of low cost demonstration houses. For the poor people of village Harwan, this is precisely what has been achieved. The contrast in the living conditions of the beneficiaries at Harwan before the construction of the cluster and after, is poignant. It tells the story of vital change, and highlights the role of developmental inputs. The small effort provides a ray of hope for the future.

Let us examine how this process came about and what the prospects are for the future.

Ever since independence efforts have been made in this direction and policies laid down for the future. Rural housing is only a single component of the total rural deve-

lopment prcgran me and it cannot be at any time viewed in isolation. The future approach to rural development including rural housing shall have to be clearly appreciated to make a meaningful headway in improving the lot of the people. This shall be discussed later in the chapter.

5·2. General Review of Conditions

As of 1947 India was faced with a number of problems. Important among these were the problems of rehabilitation of the displaced persons, poverty and unemployment. Under the domination of foreign rulars these problems had been aggravated. Naturally, the country's leadership opted for systematic economic planning to break the centuries old stagnation and to usher in an era of prosperity and well-being for all the sections of the society.

However, the experience of the past three decades of economic planning has revealed quite clearly that the process of our econnmic planning has not achieved all the desired results. The benefits of development have not reachad all the sections of population, particularly the socially and economically weaker ones. These sections, accounting for about half of the country's population, are living a miserable life. This has been the case in spite of many noteworthy achievements of economic planning.

It has been realised that the growth of income and output does not by itself necessarily benefit all the sections. particularly the weaker ones. The governments at the centre and at the state levels have, therefore, initiated various schemes for the benefit of socially and economically weaker segments of the population. These, in the main, include special assistance to the small and marginal farmers to increase their productivity ; food for work programmes to generate employment for the destitutes ; training programmes for artisans and craftsmen to encourage new economic activities ; adult and non-formal education to reduce illiteracy ; allotment of house sites to houseless ; and assistance in the construction of cheap shelter houses and so on.

These schemes aim to improve the lot of poor people throughout the country particularly in the rural areas which account for four-fifths of the population. These schemes, by improving the productivity of such people, would enable them to minimise the element of harshness and cruelty in their daily life. They would be, at least, in a position to meet their basic necessities of life. The implementation of the above mentioned schemes has been entrusted to various organisations.

5·3. Rural Housing Programmes

Housing constitutes a basic human necessity. It does not only protect the individual against nature's hazards, but also ensures the healthy growth of the individuals and the

society. A large number of the households in the country live in houses not conducive to healthy human growth. Many have no houses of their own. The government has initiated many programmes to improve the conditions of living of such households.

The main objective of such programmes has been to concentrate the public housing programmes on the construction of cheaper houses ; on the provision of several sites for families that cannot new afford built-up houses, but will be able to improve or construct their own shelter in course of time ; and on the environmental improvement of existing slum areas. Since the problems of housing in rural and urban areas are of different nature and magnitude, the government has entrusted the work of rural and urban housing, to different agencies. In so far as the rnral housing, which forms the theme of the present volume, is concerned number of agencies have come into being to help the rural poor to improve their housing conditions. These agencies, it is hoped, would in the near future solve the problem of housing in the rural areas of the country.

5·3·1. National Buildings Organisation

At the national level the National Buildings Organisation (NBO) has taken up the assignment of improving the conditions of living in the rural areas. This organisation has undertaken an experimental housing scheme to promote the construction of rural houses incorporating new construction techniques, materials and design concepts. It finances fully the construction of low-cost demonstration houses in different parts of the country side.

Being aware that India is a very diverse country in respect of socio-economic, climatic and topographic conditions, NBO has established a chain of Rnral Housing Wings in different regions of the country.

Every wing is entrusted with the job of constructing demonstration houses that suit the region in which the Wings are established. Besides, the Wings are conducting research to evolve cheaper designs and methods of housebuilding while intensifying the use of locally available and traditional construction materials. The results of this research have been encouraging.

5·3·2. Work done by Rural Housing Wing

The Rural Housing Wing at Regional Engineering College, Srinagar has constructed five clusters of low-cost demonstration houses in the Jammu and Kashmir State. Two of these are under construction. Details about these clusters have been given in the preceding chapters.

These clusters have been constructed after conducting socio-economic surveys of the concerned villages. Besides, the use of construction materials and selection of designs have

been worked out after careful analysis of the socio-economic and technical factors as well as requirements of the potential beneficiaries.

Monitoring of the functional performance of the clusters has, however, revealed that the accommodation provided does not fully meet the housing requirements of the beneficiaries. Although the beneficiaries are rural poor, most of thcm have affected certain alterations in the interior space. For example, the kitchens have been provided with almirah shelves, and small water tanks with facilities for heating water in cold winters.

Some beneficiaries have provided additional ceilings in the main living room. Typical Chulas and chimneys have also been introduced to facilitate the outward movement of smoke resulting from burning of wood and cow-dung.

There are instances where the beneficiaries have enclosed open spaces haphazardly to increase the available living accommodation. It has also been observed that the beneficiaries do not keep their houses and other surroundings neat and clean. Where sanitary lavetories have been provided, these too are generally very dirty and filthy .

The data shall be analysed alongwith the above facts with a view to improve the overall environment in the existing clusters and also to incorporate certain changes in the construction of new clusters. Rural people will be provided constant feedback and guidance for econemical construction on the basis of results of such studies.

The work done by the Rural Housing Wing in developing the low cost houses, and local use of low cost materials is substantial. In particular, this experimental housing programme has aroused considerable interest in the total study of the cost structure of various type of buildings in the state. Particular emphasis is also given to carry out research on local materials and construction techniques with a view to provide appropriate technology for the rural housing in the Himalayan Region. These regions, namely, Jammu, Kashmir and Ladakh posses distinct geographical and climatic characteristics that affect housing and habitat design censiderably. The Governmcnt of Jammu and Kashmir has provided adequate support for these activities. Such a hormonious understanding of the objects of the programme by all concerned is the sin-qua-non for the success of endeavours.

Extension of such programmes in every region of the country will help in achieving the objectives of social welfare enshrined in our constitution.

5.3.3. Shelter in the Hilly Regions :

Providing of adequate and economical shelter in the hilly regions is still largely a haphazard practice based on local custom and a peculiar synthesis of new ideas developed elsewhere

No systematic study of conditions in the low temperature regions have been undertaken. It is, therefore, of paramount impertance that the effects of the altitude, working habits, etc. on the design of comfortable and economical housing and habitats be studied and relevant results promptly applied to field conditions. In view of the stumpendous housing needs for the civilian as well as the defence personnel in the Himalayan Region in the year to come, it would be worth while and technically rewarding to sponsor further research in this direction. This is the prime need of the future.

5·4. Future Planning and Redcvelopment of Existing Rural Habitats :

5.4.1. Poor Rural Habitats :

There is another very vital matter which needs attention. This is the plight of the exiting rural habitats in various parts of the country. For example, the village folk in Kashmir are quite familiar with low cost specifications in building their homes. What is lacking is proper planning and design of houses. There are hardly any raods, and the few lanes that they have are muddy and filthy. The environment is unsightly and health hazards are ever present. Emphasis in rural housing must now shift to schemes for village redevelopment.

And what is more, there is urgent need for statutory regulations, to ensure that the rural rich do not build hapharzardly in the existing villages and create slum like conditions which would be costly to rectify later.

Attention paid to such problems in Kerala is bearing fruits and inspite of lower econo mic growth, the State has become a continuous village studded with clean, tidy and livable habitats. The authors took up this problem seriously nearty a decade ago and prepared a redevelopment plan for the village Mujond, located at a distance of 12 kilometres from Srinagar. However, the finance for the schemes has yet to come forth. The idea has not caught on yet, but it must, before it is too late.

5.4.2. Rural Redevelopment

A big thrust has new got to be made towards creating a rural redevelopment programme and this must begin where a logical beginning belongs. It is not desirable to work on many villages simultaneously. But, at least one village in every district must be chosen for such programme. $uch a task cannot be achieved by the rural population without technical assistance from outside, at least for some time. This is inspite of the fact that large rural surpluses may be available to be channalised into such welfare activities.

It should become proclaimed policy of the Government that within a period of time a particular number of villages shall be chosen for redevelopment on scientific lines.

Those villages should be taken up first where the basic minimum infrastructure has already been in existence for some time. In the absence of such amenities the planned human habitats would otherwise deteriorate again into insanitary slums. The National Buildings Organisation can play a vital role as a pace-setter in this direction. Once the idea catches on, funds can as well be mobilized by the rural population from the richer districts.

5.4.3. Work for Model Village :

The Rural Housing Wing at the Regional Engineering College, Srinagar also intends to adopt a couple of villages for the overall integrated re-development. The wing has already under-taken a detailed socio-economic and technical survey of village Chaki-Saderbal. This village is situated in the vicinity of the college. Field survey of 60 households in the village has already been completed. This information is being precessed at present to identify the potential economic activities hat can be started for the benefit of the villagers. Since the village is situated in the close vicinity of the college, monitoring of developmental schemes by the collage staff can be ensured. This village is chosen for redevelopment because it is very near to Sringar city ; it has a rich agricultural base ; there is a flourishing carpet industry ; water supply is available and so is electric power. Yet the habitat is a poor one. This can be changed. It must be changed to set an example.

5.4.5. Role of Government of Jammu and Kashmir :

It is not only that NBO is involved in improving the conditions of living of the rural poor. State governments are also actively engaged in providing basic housing facilities to economically and socially weaker sections of society in the rural areas. Various agencies at the state level are actively engaged in the re-developement of rural areas. Land-less are being alloted house-sites and financial assistance to construct their own houses. Funds alloted for this purpose are being raised from year to year. For example, in the State of Jammu and Kashmir, the Urban Developement Authority, Jammu alone has been instrumental in constructing 1800 dewelling units for economically weaker sections. Of these 300 units were constructed by the Jammu Developement Authority and in the case of remianing 1500 units every individual was provided financial assistance and technical know how.

5.5. Future Approach to Rural Development

5.5.1. Radical Approach

A radical and fresh approach to rural development is visible in the country. The emphasis on improving the lot of rural poor through the new twenty point programme is well

known. However, planning system must be constantly reviewed so that the ray of hope generated does not fizzle out all too soon. Failure has got to be avoided. The new planning approach emphasizes three goals. One is the meeting of basic human needs ; the second is the arming of the poor with political power ; and the third is optimizing growth and development of the individual.

The satisfication of basic human needs alone, does not in itself constitude development. Development implies that with the satisfaction of the basic needs of food, clothing shelter, health and security, people progressively achieve control over social and material conditions which determine their life, work and envirenment and, in particular over the processes of production, distribuction and consumption. Development also means absence of exploitation in any form whatsoever. It means growth of self-reliance, a gradual but definite movement upward in mental as well as material standards. The emphasis is on total community life.

Also it involves placing the highest value on the developement of the individual, in a balanced and harmonious manner. Emphasis on status and consumption is minimised. The approach is experimental and open-ended, rather than ideologically dogmatic.

5.5.2. Methodology

The environmental and physical realities of topography, climate, drought and floods etc. are realities that man has learnt to live with in a scientific manner. Many systematic responses have been made over the centuries for the evalution of habitat designs and housing. Any governmental interaction in the development process must be closely interlinked with the widely differing realities that confront the rural communities in the country. Also closely linked with this is the need for enhancing the community's understanding of development. The learning process must be collective. Learning together provides an incentive for joint action later. The component of such learning must reflect the local interests and priorities.

Enhancing the governments understanding of development is equally important. It is important to identify and communicate priority issues and prospects for governmental action. Interaction with the people in support of their development is essential. At the same time the national needs and goals have to be kept constantly in mind. With a better understanding of the local situation, the higher governmental levels are better placed to help and support rural development. in particular, to subsidize risk-taking efforts, and provide capital inputs to very backward communities.

The rural community has to be encouraged ever more to take initiative in development. Scientific attitudes, in respect of agriculture, have definitely taken roots in the villages, even among illiterate farmers. Results always speak better than anything else. The

shrewd farmer is an experimental scientist who adopts the practice that shows demonstrable success. This is an important factor to be kept in mind for all rural development work.

Improving community self-management and community leadership are also important in the above context. Such efforts will encourage a chain reaction of advancement in may village communities. As the villages develop initiative governmental support will become more relevant, and serve as a catalyst for action. A commitment of making the bureaucracy serve the needs of the people is involved in the process. For this a national will and supporting policies are already in existence. It remains to translate the will into action compatible with the implied policies.

There is ample need for a certain flexibility in approach for defining these objectives of rural development in the context of prevailing circumstances and that of changing values, attitudes, and fall-out from the development of industrialised countries. The planners and others have to reasonably certain that, what is being planned for achievement in the rural areas is to a large extent most likely to produce the best benefits for the people.

5.5-3. **Changing the Ethos** :

Today we see the modern and medieval in crude juxtaposition in every situation in the country. It is the bullock cart and the one lac deolar Mercedez car side by side as also the sky-scraper and the thatched hut. Such glaring contrasts are numerous.

Kashmir is no exception. And what is more important however, is the dichotomy of social value systems.

The rich who have gained through the economic boom are quite willing to acquire T.V. Sets, automobiles and all the gadegtry of the modern world, but there may be no change at all in their other living habits, in particular those which exhibit an insensitivity to the enviroment around the habitat and or a total disregard for the suffering of others. People are generally God fearing and therefore, the rich may donate funds handsomely for a mosque or temple but it is almost certain that they will not easily donate money for a primary school in their village.

Such sociological factors arise from the fact that the technogical revolution of the 20th century has not as yet succeeded in eradicating the outmoded system of the fedual centuries in the history of man. This is a major impediment in improving human habitats. Here is a challenge for all of us and we have to strive hard to get a congenial atmosphere for social ethos to ensure success of rural redevelopment plans. People have got to be motivated for change although external stimulus are necessary to bring this about, it is even more important that people are psychologically involved in this matter. Efforts in this direction have to be intensified.

There may be repetition of these factors in this monograph. The emphasis is however, amply justified. The tasks are many and stupendous. In the words of Indira Gandhi. "There is only one magic which can remove poverty and that is hard work, helped by a clear sense of purpose and discipline. On a steep road there is no time or place for a pause. Dedication to truth, and toil is the bedrock of respect, progress and prosperity".

PROJECT TEAM

1.	Director	...	Prof. Dr. O. N. Wakhlu
2.	Deputy Director	...	Prof. Dr. P. N. Kachroo
3.	Socio-Economist	...	Dr. M. L. Pandit
4.	Architect	...	Mr. C. L. Bhan
5.	Office Superintendent	...	Shri D. N. Kaul
6.	Sectional Officer	...	Mr. R. K. Rawal
7.	Draftsman	...	Shri D. N. Dhar

Rural Housing Shopian Kashmir.